



#5

## SEQUENCE LISTING

&lt;110&gt; Li, Li

Padigaru, Muralidhara  
Vernet, Corine  
Fernandes, Elma  
Shimkets, Richard  
Spaderna, Steven  
Majumder, Kumud

&lt;120&gt; Novel Polypeptides and Nucleic Acids Encoding Same

&lt;130&gt; 15966-721 US

<140> 09/804,014  
<141> 2001-03-12

<150> 60/188,316  
<151> 2000-03-10

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<150> 60/190,231  
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&lt;160&gt; 75

&lt;170&gt; PatentIn Ver. 2.1

<210> 1  
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<212> DNA  
<213> Homo sapiens

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<212> PRT

<213> Homo sapiens

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Arg Arg Pro Pro Pro Arg Ala Ser Thr Lys Thr Gly Ser Gln Pro Ala  
 35 40 45

Met Pro Ser Pro Leu Arg Pro Gln Gly Ser Ala Gly Val Leu Pro Glu  
 50 55 60

Pro Arg Val Pro Val Gln Lys Pro Gly Ile Asn Ala Ala Ser Pro Ile  
 65 70 75 80

Gly Thr Val Arg Val Glu Arg Gly Arg Pro Thr Val Ser Pro Ala Gly  
 85 90 95

Arg Gly Ser Pro Arg Gly Gly His Val Gly Gly Leu Thr Ala Pro Ser  
 100 105 110

Thr Pro Gly His Ser Asp His Gly Leu His Thr Gln Lys Gln Ser Gly  
 115 120 125

Ser His Ala Trp Leu Cys Cys Gln Gln Thr Ala Pro Asn Leu Pro Cys  
 130 135 140

Ser Ser Ser Gln Glu Lys Arg Pro Ala Ala Ser Leu Pro Gly Met Val  
 145 150 155 160

Gly Pro Leu Arg His Ser Leu Gly Val Gln Ala Thr His Pro His Ser  
 165 170 175

Thr Gly Val Arg Gly Ser Val Arg Pro Trp Asp Gly Pro Ala Gly Thr  
 180 185 190

Gly Gly Gln Arg Val Arg Gly Gly Arg Arg Ser Pro Thr Lys Gly Ser  
 195 200 205

Ser Gln Ala Cys Val Gly Pro Arg Gly Ala Ala Pro Pro Gly Trp Asp  
 210 215 220

Lys Ala Gly Ser Trp Leu Ser Ser Ala Thr Ala Gln Leu Pro Gln Gly  
 225 230 235 240

Thr Lys Gly Arg Leu Arg Asp Glu Val Leu Thr His Thr Met Gly Lys  
 245 250 255

Pro Arg His Gly Lys Val Gly Gly Ala Ala Arg Leu Ala Pro Arg  
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His Glu Leu Gly Ser Gly Cys Pro Gln Pro  
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<213> Homo sapiens

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Arg Arg Pro Pro Pro Arg Ala Ser Thr Lys Thr Gly Ser Gln Pro Ala  
 35 40 45

Met Pro Ser Pro Leu Arg Pro Gln Gly Ser Ala Gly Val Leu Pro Glu  
 50 55 60

Pro Arg Val Pro Val Gln Lys Pro Gly Ile Asn Ala Ala Ser Pro Ile  
 65 70 75 80

Gly Thr Val Arg Val Glu Arg Gly Arg Pro Thr Val Ser Pro Ala Gly  
 85 90 95

Arg Gly Ser Pro Arg Gly Gly His Val Gly Gly Leu Thr Ala Pro Ser  
 100 105 110

Thr Pro Gly His Ser Asp His Gly Leu His Thr Gln Lys Gln Ser Gly

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Ser Ser Ser Gln Glu Lys Arg Pro Ala Ala Ser Leu Pro Gly Met Val		
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Gly Pro Leu Arg His Ser Leu Gly Val Gln Ala Thr His Pro His Ser		
165	170	175
Thr Gly Val Arg Gly Ser Val Arg Pro Trp Asp Gly Pro Ala Gly Thr		
180	185	190
Gly Gly Gln Arg Val Arg Gly Gly Arg Arg Ser Pro Thr Lys Gly Ser		
195	200	205
Ser Gln Ala Cys Val Gly Pro Arg Gly Ala Ala Pro Pro Gly Trp Asp		
210	215	220
Lys Ala Gly Ser Trp Leu Ser Ser Ala Thr Ala Gln Leu Pro Gln Gly		
225	230	235
240		
Thr Lys Gly Arg Leu Arg Asp Glu Val Leu Thr His Thr Met Gly Lys		
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Pro Arg His Gly Lys Val Gly Gly Ala Ala Arg Leu Ala Pro Arg		
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Gly	Asp	Thr	Ala	His	Leu	Pro	Leu	Ser	Cys	Leu	Gly	Ala	Gln	Glu	Ser
															30

  

Arg	Arg	Pro	Pro	Pro	Arg	Ala	Ser	Thr	Lys	Thr	Gly	Ser	Gln	Pro	Ala
															45

  

Met	Pro	Ser	Pro	Leu	Arg	Pro	Gln	Gly	Ser	Ala	Gly	Val	Leu	Pro	Glu
															60

  

Pro	Arg	Val	Pro	Val	Gln	Lys	Pro	Gly	Ile	Asn	Ala	Ala	Ser	Pro	Ile
															80

  

Gly	Thr	Val	Lys	Val	Glu	Arg	Gly	Arg	Pro	Thr	Val	Ser	Pro	Ala	Gly
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Arg	Gly	Ser	Pro	Arg	Gly	Gly	His	Val	Gly	Gly	Leu	Thr	Ala	Pro	Ser
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Thr	Pro	Gly	His	Ser	Asp	His	Gly	Leu	His	Thr	Gln	Lys	Gln	Ser	Gly
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Ser	His	Ala	Trp	Leu	Cys	Cys	Gln	Gln	Thr	Ala	Pro	Asn	Leu	Pro	Cys
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Ser	Ser	Ser	Gln	Glu	Lys	Arg	Pro	Ala	Ala	Ser	Leu	Pro	Gly	Met	Val
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Gly	Pro	Leu	Arg	His	Ser	Leu	Gly	Val	Gln	Ala	Thr	His	Pro	His	Ser
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Thr Gly Val Arg Gly Ser Val Arg Pro Trp Asp Gly Pro Ala Gly Thr  
 180 185 190

Gly Gly Gln Arg Val Arg Gly Gly Arg Arg Ser Pro Thr Lys Gly Ser  
 195 200 205

Ser Gln Ala Cys Val Gly Pro Arg Gly Ala Ala Pro Pro Gly Trp Asp  
 210 215 220

Lys Ala Gly Ser Trp Leu Ser Ser Ala Thr Ala Gln Leu Pro Gln Gly  
 225 230 235 240

Thr Lys Gly Arg Leu Arg Asp Glu Val Leu Thr His Thr Met Gly Lys  
 245 250 255

Pro Arg His Gly Lys Val Gly Gly Ala Ala Arg Leu Ala Pro Arg  
 260 265 270

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 275 280 285

His Glu Leu Gly Ser Gly Cys Pro Gln Pro  
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<210> 7  
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 <212> DNA  
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&lt;210&gt; 8

&lt;211&gt; 559

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 8

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50 55 60Pro Ser Arg Pro Ala Gly Leu Phe Tyr Ala Arg Thr Pro Asp Thr Gly  
65 70 75 80His Arg Ala Gly Ala Ala Val Gly Ala Thr Arg Arg Phe Ala Gly Arg  
85 90 95Arg Gly Cys Ala Arg His Gly Ala Ala Val Pro Ala Ala Pro Cys Gly  
100 105 110Cys Cys Glu Arg Leu Val Leu Asn Val Ala Gly Leu Arg Phe Glu Thr  
115 120 125Arg Ala Arg Thr Leu Gly Arg Phe Pro Asp Thr Leu Leu Gly Asp Pro  
130 135 140

Ala Arg Arg Gly Arg Phe Tyr Asp Asp Ala Arg Arg Glu Tyr Phe Phe  
 145 150 155 160  
  
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 165 170 175  
  
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 180 185 190  
  
 Glu Glu Val Ala Phe Tyr Gly Leu Gly Ala Ala Ala Leu Ala Arg Leu  
 195 200 205  
  
 Arg Glu Asp Glu Gly Cys Pro Val Pro Pro Glu Arg Pro Leu Pro Arg  
 210 215 220  
  
 Arg Ala Phe Ala Arg Gln Leu Trp Leu Leu Phe Glu Phe Pro Glu Ser  
 225 230 235 240  
  
 Ser Gln Ala Ala Arg Val Leu Ala Val Val Ser Val Leu Val Ile Leu  
 245 250 255  
  
 Val Ser Ile Val Val Phe Cys Leu Glu Thr Leu Pro Asp Phe Arg Asp  
 260 265 270  
  
 Asp Arg Asp Gly Thr Gly Leu Ala Ala Ala Ala Ala Gly Pro Val  
 275 280 285  
  
 Phe Pro Ala Pro Leu Asn Gly Ser Ser Gln Met Pro Gly Asn Pro Pro  
 290 295 300  
  
 Arg Leu Pro Phe Asn Asp Pro Phe Phe Val Val Glu Thr Leu Cys Ile  
 305 310 315 320  
  
 Cys Trp Phe Ser Phe Glu Leu Leu Val Arg Leu Leu Val Cys Pro Ser  
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 Gly Val Gly Gln Gln Ala Met Ser Leu Ala Ile Leu Arg Val Ile Arg  
 370 375 380  
  
 Leu Val Arg Val Phe Arg Ile Phe Lys Leu Ser Arg His Ser Lys Gly  
 385 390 395 400

Leu Gln Ile Leu Gly Gln Thr Leu Arg Ala Ser Met Arg Glu Leu Gly  
 405 410 415

Leu Leu Ile Phe Phe Leu Phe Ile Gly Val Val Leu Phe Ser Ser Ala  
 420 425 430

Val Tyr Phe Ala Glu Val Asp Arg Val Asp Ser His Phe Thr Ser Ile  
 435 440 445

Pro Glu Ser Phe Trp Trp Ala Val Val Thr Met Thr Thr Val Gly Tyr  
 450 455 460

Gly Asp Met Ala Pro Val Thr Val Gly Gly Lys Ile Val Gly Ser Leu  
 465 470 475 480

Cys Ala Ile Ala Gly Val Leu Thr Ile Ser Leu Pro Val Pro Val Ile  
 485 490 495

Val Ser Asn Phe Ser Tyr Phe Tyr His Arg Glu Thr Glu Gly Glu Glu  
 500 505 510

Ala Gly Met Phe Ser His Val Asp Met Gln Pro Cys Gly Pro Leu Glu  
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Gly Lys Ala Asn Gly Gly Leu Val Asp Gly Glu Val Pro Glu Leu Pro  
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<211> 1080

<212> DNA

<213> Homo sapiens

<400> 9

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<211> 251

<212> PRT

<213> Homo sapiens

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Gln Ala Ser Arg Glu Ala Gly Ala Ala Ala Leu Arg Asn Val Ala Gln  
 35 40 45

Arg Leu Phe Glu Asn Tyr Gln Thr Gln Ser Glu Glu Val Arg Lys Lys  
 50 55 60

Gln Glu Gly Ser Lys Gln Leu Leu Gln Val Asn Lys Leu Glu Lys Glu  
 65 70 75 80

Gln Lys Leu Lys Gln His Val Glu Asn Leu Asn Gln Val Ala Glu Lys  
 85 90 95

Leu Glu Glu Lys His Ser Gln Ile Thr Glu Leu Glu Asn Leu Val Gln  
 100 105 110

Arg Met Glu Lys Glu Lys Arg Thr Leu Leu Glu Arg Lys Leu Ser Leu  
 115 120 125

Glu Asn Lys Leu Leu Gln Leu Lys Ser Ser Ala Thr Tyr Gly Lys Ser  
 130 135 140

Cys Gln Asp Leu Gln Arg Glu Ile Ser Ile Leu Gln Glu Gln Ile Ser  
 145 150 160

His Leu Gln Phe Val Ile His Ser Gln His Gln Asn Leu Arg Ser Val  
 165 170 175

Ile Gln Glu Met Glu Gly Leu Lys Asn Asn Leu Lys Glu Gln Asp Lys  
 180 185 190

Arg Ile Glu Asn Leu Arg Glu Lys Val Asn Ile Leu Glu Ala Gln Asn  
 195 200 205

Lys Glu Leu Lys Thr Gln Val Ala Leu Ser Ser Glu Thr Pro Arg Thr  
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 <212> DNA  
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 tcacaaactg cagatgagat atctgtctt ggagaatgga aatctccctc tgaagatctt 600  
 ggcaactttt tccatatgtt gcactggatt tgagttgcag tagttgtttt tccaaagac 660  
 gttttcttc tagtagtgtt ctctttctt tttccatttctt ctgtacaagg ttctccaattt 720  
 ctgttaatttactgtt tttcaagttt tttcagcaac ttgattcaga ttttcaacat 780  
 gttgtttcaat tttctgtttctt tttcaagctt tgtaaacctg gagtaatttgtt ttactgtctt 840  
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 cgtttctcag agctgctgtt cctgcttctt tggaggctt cagtttgattt ttcaataactt 960  
 cattctctttt gttcatttctt aagagctgtt ggtctttcc ttttatctttt ttcataagca 1020  
 aatccaaactt gcaacaagaa ggatccattt cagaatcaga gcccgttga aggttccac 1080  
 agtgcttgc atctagtttgc tgatttgcac tgcattgtctt ttttcatctt ttaaacatctt 1140  
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 tttgagcgaa ctagactca tacaaggcag aattatcttccatctt cttggggaa 1260  
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 tagagctaaa acgccaacactt tggctttta gaagttcaga gatgtttcca tcatattaag 1380  
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 cactggggaa gcccgttgcgaa aggcacactt acacccacac ac 1482

<210> 12  
 <211> 335  
 <212> PRT  
 <213> Homo sapiens

<400> 12

Met	Thr	Thr	Val	Ala	Val	Thr	Thr	Glu	Ile	Pro	Pro	Arg	Asp	Lys	Met
1															15
Glu Asp Asn Ser Ala Leu Tyr Glu Ser Thr Ser Ala His Ile Ile Glu															
20 25 30															
Glu Thr Glu Tyr Val Lys Lys Ile Arg Thr Thr Leu Gln Lys Ile Arg															
35 40 45															
Thr Gln Met Phe Lys Asp Glu Ile Arg His Asp Ser Thr Asn His Lys															
50 55 60															
Leu Asp Ala Lys His Cys Gly Asn Leu Gln Gln Gly Ser Asp Ser Glu															
65 70 75 80															
Met Asp Pro Ser Cys Cys Ser Leu Asp Leu Leu Met Lys Lys Ile Lys															
85 90 95															
Gly Lys Asp Leu Gln Leu Leu Glu Met Asn Lys Glu Asn Glu Val Leu															
100 105 110															
Lys Ile Lys Leu Gln Ala Ser Arg Glu Ala Gly Ala Ala Leu Arg															
115 120 125															
Asn Val Ala Gln Arg Leu Phe Glu Asn Tyr Gln Thr Gln Ser Glu Glu															
130 135 140															
Val Arg Lys Lys Gln Glu Asp Ser Lys Gln Leu Leu Gln Val Asn Lys															
145 150 155 160															
Leu Glu Lys Glu Gln Lys Leu Lys Gln His Val Glu Asn Leu Asn Gln															
165 170 175															
Val Ala Glu Lys Leu Glu Glu Lys His Ser Gln Ile Thr Glu Leu Glu															
180 185 190															
Asn Leu Val Gln Arg Met Glu Lys Glu Lys Arg Thr Leu Leu Glu Arg															
195 200 205															
Lys Leu Ser Leu Glu Asn Lys Leu Leu Gln Leu Lys Ser Ser Ala Thr															

210

215

220

Tyr Gly Lys Ser Cys Gln Asp Leu Gln Arg Glu Ile Ser Ile Leu Gln  
 225 230 235 240

Glu Gln Ile Ser His Leu Gln Phe Val Ile His Ser Gln His Gln Asn  
 245 250 255

Leu Arg Ser Val Ile Gln Glu Met Glu Gly Leu Lys Asn Asn Leu Lys  
 260 265 270

Glu Gln Asp Lys Arg Ile Glu Asn Leu Arg Glu Lys Val Asn Ile Leu  
 275 280 285

Glu Ala Gln Asn Lys Glu Leu Lys Thr Gln Val Ala Leu Ser Ser Glu  
 290 295 300

Thr Pro Arg Thr Lys Val Ser Lys Ala Val Ser Thr Ser Glu Leu Lys  
 305 310 315 320

Thr Glu Gly Val Ser Pro Tyr Leu Met Leu Ile Arg Leu Arg Lys  
 325 330 335

<210> 13

<211> 1442

<212> DNA

<213> Homo sapiens

<400> 13

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 gtcttaatat gatggaaaaca tctctgaact tctaaaagac caagggttggc gtttagctc 120  
 tattaatttt acttcgtctt ggccagaatt cacaatgaca acagtgcacag tgaccacaga 180  
 aattccccca agggataaga tggaaagataa ttctgccttg tatgagtcta cgtccgctca 240  
 cattattgaa gaaaccgagt atgtaaaaaa gattcgaact actctgcaaa agatcaggac 300  
 ccagatgttt aaagatgaaa taagacatga cagtacaat cacaacttag atgcaaagca 360  
 ctgtggaaac cttcaacagg gctctgattc tgaaatggat cttcttggt gcagtttgg 420  
 tttgctttag aaaaagataa aaggaaaaga cctacagctc ttagaaatga acaaagagaa 480  
 tgaagtattt aaaatcaagc tgcaagcctc cagagaagca ggagcagcag ctctgagaaa 540  
 cgtggcccg agattatttg aaaactacca aacgcaatct gaagaagtga gaaagaagca 600  
 ggaggacagt aaacaattac tccaggttaa caagctgaa aaagaacaga aattgaaaca 660  
 acatgttcaa aatctgaatc aagtgtctga aaaacttcaa gaaaaacaca gtcaaattac 720  
 agaattggag aaccttgtac agagaatgga aaagggaaag agaacactac tagaaagaaa 780  
 actgtctttg gaaaacaagc tactgcaact caaatccagt gctacatatg gaaaaagttg 840  
 ccaggatctt cagagggaga tttccattct ccaggagcag atctctcattc tgcagttgt 900  
 gattcactcc caacatcaga acctgcgcag tgtcatccag gagatggaag gattaaaaaa 960  
 taatttaaaa gaacaagaca aaagaattga aaatctcaga gaaaaggtt acataacttga 1020  
 agcccagaat aaagaactaa aaacccaggt agcacttca tctgaaactc cttaggacaaa 1080

ggtatctaag gctgtctcta caagtgaatt gaagaccgaa ggtgttccc cttatataat 1140  
 gttgattagg ttacgaaat gaactggctg gatgaagatc tgattnaa agactgcgtg 1200  
 agtcttattt attctctgaa acacagccca agtttcatgt taaaatggca aaatgccatt 1260  
 atttaaatgg aacttattac ataccaatgg cttgcaaga agatgacatt tcagaaaatc 1320  
 aaacaaatct atattaatg gatggactct tcaaaactta ccaaatagtt gaagaaacca 1380  
 ggtgccttct catgatggaa gacagattct gctttaaatt aaaaaaaaaa aaatctgaaa 1440  
 aa 1442

<210> 14  
 <211> 335  
 <212> PRT  
 <213> Homo sapiens

<400> 14  
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 20 25 30  
 Glu Thr Glu Tyr Val Lys Lys Ile Arg Thr Thr Leu Gln Lys Ile Arg  
 35 40 45  
 Thr Gln Met Phe Lys Asp Glu Ile Arg His Asp Ser Thr Asn His Lys  
 50 55 60  
 Leu Asp Ala Lys His Cys Gly Asn Leu Gln Gln Gly Ser Asp Ser Glu  
 65 70 75 80  
 Met Asp Pro Ser Cys Cys Ser Leu Asp Leu Leu Met Lys Lys Ile Lys  
 85 90 95  
 Gly Lys Asp Leu Gln Leu Leu Glu Met Asn Lys Glu Asn Glu Val Leu  
 100 105 110  
 Lys Ile Lys Leu Gln Ala Ser Arg Glu Ala Gly Ala Ala Leu Arg  
 115 120 125  
 Asn Val Ala Gln Arg Leu Phe Glu Asn Tyr Gln Thr Gln Ser Glu Glu  
 130 135 140  
 Val Arg Lys Lys Gln Glu Asp Ser Lys Gln Leu Leu Gln Val Asn Lys  
 145 150 155 160  
 Leu Glu Lys Glu Gln Lys Leu Lys Gln His Val Glu Asn Leu Asn Gln  
 165 170 175

Val Ala Glu Lys Leu Glu Glu Lys His Ser Gln Ile Thr Glu Leu Glu  
 180 185 190

Asn Leu Val Gln Arg Met Glu Lys Glu Lys Arg Thr Leu Leu Glu Arg  
 195 200 205

Lys Leu Ser Leu Glu Asn Lys Leu Leu Gln Leu Lys Ser Ser Ala Thr  
 210 215 220

Tyr Gly Lys Ser Cys Gln Asp Leu Gln Arg Glu Ile Ser Ile Leu Gln  
 225 230 235 240

Glu Gln Ile Ser His Leu Gln Phe Val Ile His Ser Gln His Gln Asn  
 245 250 255

Leu Arg Ser Val Ile Gln Glu Met Glu Gly Leu Lys Asn Asn Leu Lys  
 260 265 270

Glu Gln Asp Lys Arg Ile Glu Asn Leu Arg Glu Lys Val Asn Ile Leu  
 275 280 285

Glu Ala Gln Asn Lys Glu Leu Lys Thr Gln Val Ala Leu Ser Ser Glu  
 290 295 300

Thr Pro Arg Thr Lys Val Ser Lys Ala Val Ser Thr Ser Glu Leu Lys  
 305 310 315 320

Thr Glu Gly Val Ser Pro Tyr Leu Met Leu Ile Arg Leu Arg Lys  
 325 330 335

<210> 15  
 <211> 1056  
 <212> DNA  
 <213> Homo sapiens

<400> 15  
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 ctattgatttgc cccggatctc ccagagctgc agtgtggcag aaatcgagga ggctctgcag 120  
 gctggtttag ctcccttggg ggagtacaga ctgcttggaa ggatgttcag gaggatgag 180  
 aacaggaaag tagccttagt agggcttact gcggagacta gtcacccct ggtccctaag 240  
 gagataccgg gaaaaaggggg tatctggaga gtgatctta agccccctga cccagataat 300  
 acatttttaa gcagattaaa tgaatttttgc gccccggagg gcatgacagt gggtgagttg 360  
 agcagagctc ttggacatga aaatggctcc ttagacccag agcaggggcat gatcccgaa 420  
 atgtggggccc ctatgttggc acaggcatta gaggctcttc agcctccct gcaatgcttgc 480  
 aagtataaaa agctgagagt gttctcgggc agggagtctc cagaaccagg agaagaagaa 540  
 tttggacgct ggtatgttca tactactcag atgataaagg cgtggcagggt gccagatgta 600  
 gagaagagaa ggcgattgct agagagcctt cgaggccctt cacttgatgtt tattcgtgtc 660

ctcaagataa acaatccttt aattactgtc gatgaatgtc tgcaggctct tgaggaggta 720  
 ttggggta cagataatcc tagggagttg caggtcaa atctaacccac ttaccagaag 780  
 gatgagggaaa agttgtcggc ttatgtacta aggctggagc ctttggtaaca gaagctggta 840  
 cagagaggag caattgagag agatgctgtg aatcaggccc gcctagacca agtcattgct 900  
 gggcagtcc acaaaacaat tcgcagagag cttaatctgc cagaggatgg cccagccct 960  
 gtttcttgc agttattggt actaataaaag gattatgagg cagctgagga ggaggaggcc 1020  
 cttctccagg caatattgga aggttaatttc acctga 1056

<210> 16  
 <211> 351  
 <212> PRT  
 <213> Homo sapiens

<400> 16  
 Met Thr Leu Arg Leu Leu Glu Asp Trp Cys Arg Gly Met Asp Met Asn  
 1 5 10 15  
 Pro Arg Lys Ala Leu Leu Ile Ala Gly Ile Ser Gln Ser Cys Ser Val  
 20 25 30  
 Ala Glu Ile Glu Glu Ala Leu Gln Ala Gly Leu Ala Pro Leu Gly Glu  
 35 40 45  
 Tyr Arg Leu Leu Gly Arg Met Phe Arg Arg Asp Glu Asn Arg Lys Val  
 50 55 60  
 Ala Leu Val Gly Leu Thr Ala Glu Thr Ser His Ala Leu Val Pro Lys  
 65 70 75 80  
 Glu Ile Pro Gly Lys Gly Ile Trp Arg Val Ile Phe Lys Pro Pro  
 85 90 95  
 Asp Pro Asp Asn Thr Phe Leu Ser Arg Leu Asn Glu Phe Leu Ala Gly  
 100 105 110  
 Glu Gly Met Thr Val Gly Glu Leu Ser Arg Ala Leu Gly His Glu Asn  
 115 120 125  
 Gly Ser Leu Asp Pro Glu Gln Gly Met Ile Pro Glu Met Trp Ala Pro  
 130 135 140  
 Met Leu Ala Gln Ala Leu Glu Ala Leu Gln Pro Ala Leu Gln Cys Leu  
 145 150 155 160  
 Lys Tyr Lys Lys Leu Arg Val Phe Ser Gly Arg Glu Ser Pro Glu Pro  
 165 170 175

Gly Glu Glu Glu Phe Gly Arg Trp Met Phe His Thr Thr Gln Met Ile  
 180 185 190

Lys Ala Trp Gln Val Pro Asp Val Glu Lys Arg Arg Arg Leu Leu Glu  
 195 200 205

Ser Leu Arg Gly Pro Ala Leu Asp Val Ile Arg Val Leu Lys Ile Asn  
 210 215 220

Asn Pro Leu Ile Thr Val Asp Glu Cys Leu Gln Ala Leu Glu Glu Val  
 225 230 235 240

Phe Gly Val Thr Asp Asn Pro Arg Glu Leu Gln Val Lys Tyr Leu Thr  
 245 250 255

Thr Tyr Gln Lys Asp Glu Glu Lys Leu Ser Ala Tyr Val Leu Arg Leu  
 260 265 270

Glu Pro Leu Leu Gln Lys Leu Val Gln Arg Gly Ala Ile Glu Arg Asp  
 275 280 285

Ala Val Asn Gln Ala Arg Leu Asp Gln Val Ile Ala Gly Ala Val His  
 290 295 300

Lys Thr Ile Arg Arg Glu Leu Asn Leu Pro Glu Asp Gly Pro Ala Pro  
 305 310 315 320

Gly Phe Leu Gln Leu Leu Val Leu Ile Lys Asp Tyr Glu Ala Ala Glu  
 325 330 335

Glu Glu Glu Ala Leu Leu Gln Ala Ile Leu Glu Gly Asn Phe Thr  
 340 345 350

<210> 17

<211> 499

<212> DNA

<213> Homo sapiens

<400> 17

caaaatggtt aagaacacaa accagtacgc tgctcacgcc gatcccgctc cgctggttcc 60  
 gcacgctccg cacaccagcc tgcgccgacc atggccacc gttcagcagc tggaaggaag 120  
 atggcgccctg gcggacagca aaggcttga tgcatacatg aagaaactag gagtggaaat 180  
 atctttgcgc aatatggcg caatggccaa accagactgt atcatcactt gtgtatggcaa 240  
 aaacctcacc ataaaaactg agagcacttt gaaaacaaca cagtttctt gtaccctggg 300  
 agagaagtt gaaggaacca cagctgttgg cagaaaaact cagactgtct gcagcttac 360  
 agatggtgca ttgggtccgc atcaggagtg ggatggaaag gaaaacacaa taacaagaaa 420  
 attgaaagat gcatcagtgg tggattgtgt cacgaacaat gtcacactgta ctcggatcta 480

tgaaaaagta gaataaaaa

499

<210> 18  
 <211> 163  
 <212> PRT  
 <213> Homo sapiens

<400> 18

Met	Val	Lys	Asn	Thr	Asn	Gln	Tyr	Ala	Ala	His	Ala	Asp	Pro	Ala	Pro
1															
								10						15	

  

Leu	Val	Pro	His	Ala	Pro	His	Thr	Ser	Leu	Arg	Ala	Pro	Trp	Ala	Thr
								25						30	

  

Val	Gln	Gln	Leu	Glu	Gly	Arg	Trp	Arg	Leu	Ala	Asp	Ser	Lys	Gly	Phe
								35					45		

  

Asp	Ala	Tyr	Met	Lys	Lys	Leu	Gly	Val	Gly	Ile	Ser	Leu	Arg	Asn	Met
								50					60		

  

Gly	Ala	Met	Ala	Lys	Pro	Asp	Cys	Ile	Ile	Thr	Cys	Asp	Gly	Lys	Asn
								65					80		

  

Leu	Thr	Ile	Lys	Thr	Glu	Ser	Thr	Leu	Lys	Thr	Thr	Gln	Phe	Ser	Cys
								85					95		

  

Thr	Leu	Gly	Glu	Lys	Phe	Glu	Gly	Thr	Thr	Ala	Val	Gly	Arg	Lys	Thr
								100					110		

  

Gln	Thr	Val	Cys	Ser	Phe	Thr	Asp	Gly	Ala	Leu	Val	Pro	His	Gln	Glu
								115					125		

  

Trp	Asp	Gly	Lys	Glu	Asn	Thr	Ile	Thr	Arg	Lys	Leu	Lys	Asp	Ala	Ser
								130					140		

  

Val	Val	Asp	Cys	Val	Thr	Asn	Asn	Val	Thr	Cys	Thr	Arg	Ile	Tyr	Glu
								145					160		

  

Lys Val Glu

<210> 19  
 <211> 413  
 <212> DNA  
 <213> Homo sapiens

&lt;400&gt; 19

gcaccatggc caccgttcag cagctggaaag gaagatggcg cctggcggac agcaaaggct 60  
 ttgatgcata catgaagaaa ctaggagtgg gaatatctt gcgcataatg ggcgcataatgg 120  
 ccaaaccaga ctgtatcatc acttgtatg gcaaaaacctt caccataaaa actgagagca 180  
 cttgaaaac aacacagttt tcttgtaccc tgggagagaa gtttgaagga accacagctg 240  
 ttggcagaaa aactcagact gtctgcagct ttacagatgg tgcattgggtt ccgcataatgg 300  
 agtgggatgg gaaggaaaac acaataacaa gaaaattgaa agatgcata gtgggtggatt 360  
 gtgtcacgaa caatgtcacc tgtactcgaa tctatgaaaa agtagaataa aaa 413

&lt;210&gt; 20

&lt;211&gt; 134

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 20

Met	Ala	Thr	Val	Gln	Gln	Leu	Glu	Gly	Arg	Trp	Arg	Leu	Ala	Asp	Ser
1															
														10	15

Lys	Gly	Phe	Asp	Ala	Tyr	Met	Lys	Lys	Leu	Gly	Val	Gly	Ile	Ser	Leu	
														20	25	30

Arg	Asn	Met	Gly	Ala	Met	Ala	Lys	Pro	Asp	Cys	Ile	Ile	Thr	Cys	Asp	
														35	40	45

Gly	Lys	Asn	Leu	Thr	Ile	Lys	Thr	Glu	Ser	Thr	Leu	Lys	Thr	Thr	Gln	
														50	55	60

Phe	Ser	Cys	Thr	Leu	Gly	Glu	Lys	Phe	Glu	Gly	Thr	Thr	Ala	Val	Gly		
														65	70	75	80

Arg	Lys	Thr	Gln	Thr	Val	Cys	Ser	Phe	Thr	Asp	Gly	Ala	Leu	Val	Pro	
														85	90	95

His	Gln	Glu	Trp	Asp	Gly	Lys	Glu	Asn	Thr	Ile	Thr	Arg	Lys	Leu	Lys	
														100	105	110

Asp	Ala	Ser	Val	Val	Asp	Cys	Val	Thr	Asn	Asn	Val	Thr	Cys	Thr	Arg	
														115	120	125

Ile	Tyr	Glu	Lys	Val	Glu											
														130		

&lt;210&gt; 21

&lt;211&gt; 468

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 21

gctgtagaca tggggatcg atgctggaga aacccctgc tgctgctgat tgccctggc 60  
 ctgtcagcca agctgggtca cttccaaagg tggaggcct tccagcagaa gctcatgagc 120  
 aagaagaaca tgaattcaac actcaacttc ttcattcaat cctacaacaa tgccagcaac 180  
 gacacctact tatatcgagt ccagaggcta attcgaagtc agatgcagct gacgacggg 240  
 gtggagtata tagtcaactgt gaagattggc tggaccaaatt gcaagaggaa tgacacgagc 300  
 aattttccct gccccctgca accaagaag ctgagaaaga gtttaatttgcgagtttt 360  
 atatacacca tgccctggaa aactatttc cagctctgga acaattcctg tctggagccc 420  
 gagcatgtgg gcagaaacct cagatgaggg ctcatatgtat tgagttgt 468

&lt;210&gt; 22

&lt;211&gt; 145

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 22

Met Gly Ile Gly Cys Trp Arg Asn Pro Leu Leu Leu Leu Ile Ala Leu  
 1 5 10 15

Val Leu Ser Ala Lys Leu Gly His Phe Gln Arg Trp Glu Gly Phe Gln  
 20 25 30

Gln Lys Leu Met Ser Lys Lys Asn Met Asn Ser Thr Leu Asn Phe Phe  
 35 40 45

Ile Gln Ser Tyr Asn Asn Ala Ser Asn Asp Thr Tyr Leu Tyr Arg Val  
 50 55 60

Gln Arg Leu Ile Arg Ser Gln Met Gln Leu Thr Thr Gly Val Glu Tyr  
 65 70 75 80

Ile Val Thr Val Lys Ile Gly Trp Thr Lys Cys Lys Arg Asn Asp Thr  
 85 90 95

Ser Asn Ser Ser Cys Pro Leu Gln Thr Lys Lys Leu Arg Lys Ser Leu  
 100 105 110

Ile Cys Glu Ser Leu Ile Tyr Thr Met Pro Trp Leu Asn Tyr Phe Gln  
 115 120 125

Leu Trp Asn Asn Ser Cys Leu Glu Pro Glu His Val Gly Arg Asn Leu  
 130 135 140

Arg

145

<210> 23  
 <211> 278  
 <212> PRT  
 <213> Homo sapiens

<400> 23

Glu	Pro	Val	Pro	Gly	Ser	Arg	Arg	Gln	Thr	Asp	Lys	Gly	Cys	Ser	Gly
1															
Asp	Thr	Ala	His	Leu	Pro	Leu	Ser	Cys	Leu	Gly	Ala	Gln	Glu	Ser	Arg
Arg	Pro	Pro	Pro	Arg	Ala	Ser	Thr	Lys	Thr	Gly	Ser	Gln	Pro	Ala	Met
Pro	Ser	Pro	Leu	Arg	Pro	Gln	Gly	Ser	Ala	Gly	Val	Leu	Pro	Glu	Pro
Arg	Val	Pro	Val	Gln	Lys	Pro	Gly	Ile	Asn	Ala	Ala	Ser	Pro	Ile	Gly
Thr	Val	Lys	Val	Glu	Arg	Gly	Arg	Pro	Thr	Val	Ser	Pro	Ala	Gly	Arg
Gly	Ser	Pro	Arg	Gly	Gly	His	Val	Gly	Gly	Leu	Thr	Ala	Pro	Ser	Thr
Pro	Gly	His	Ser	Asp	His	Gly	Leu	His	Thr	Gln	Lys	Gln	Ser	Gly	Ser
His	Ala	Trp	Leu	Cys	Cys	Gln	Gln	Thr	Ala	Pro	Asn	Leu	Pro	Cys	Ser
Ser	Ser	Gln	Glu	Lys	Arg	Pro	Ala	Ala	Ser	Leu	Pro	Gly	Met	Val	Gly
Pro	Leu	Arg	His	Ser	Leu	Gly	Val	Gln	Ala	Thr	His	Pro	His	Ser	Thr
Gly	Val	Arg	Gly	Ser	Val	Arg	Pro	Trp	Asp	Gly	Pro	Ala	Gly	Thr	Gly
Gly	Gln	Arg	Val	Arg	Gly	Arg	Arg	Ser	Pro	Thr	Lys	Gly	Ser	Ser	
Gln	Ala	Cys	Val	Gly	Pro	Arg	Gly	Ala	Ala	Pro	Pro	Gly	Trp	Asp	Lys

Ala Gly Ser Trp Leu Ser Ser Ala Thr Ala Gln Leu Pro Gln Gly Thr  
 225 230 235 240

Lys Gly Arg Leu Arg Asp Glu Val Leu Thr His Thr Met Gly Lys Pro  
 245 250 255

Arg His Gly Lys Val Gly Gly Ala Ala Arg Leu Ala Pro Arg Ser  
 260 265 270

Gln Ala Gly Arg Pro Glu  
 275

<210> 24

<211> 284

<212> PRT

<213> Strongylocentrotus purpuratus

<400> 24

Glu Pro Gly Pro Gly Gly Ala Pro Gly Gln Arg Gly Asp Pro Gly Asp  
 1 5 10 15

Leu Gly Pro Gln Gly Ser Pro Gly Ser Pro Gly Phe Ala Gly Pro Pro  
 20 25 30

Gly Arg Ser Gly Asn Pro Gly Pro Gln Gly Glu Leu Gly Pro Thr Gly  
 35 40 45

Ala Arg Gly Glu Thr Gly Gly Pro Gly Pro Ser Gly Pro Thr Gly Asp  
 50 55 60

Pro Gly Pro Gln Gly Pro Leu Gly Ala Pro Gly Gln Gln Gly Glu Arg  
 65 70 75 80

Gly Glu Thr Gly Pro Gln Gly Gln Gly Gly Pro Pro Gly Pro Ile Gly  
 85 90 95

Ser Leu Gly Ala Pro Gly Ala Gln Gly Pro Pro Gly Pro Thr Gly Pro  
 100 105 110

Ser Gly Asn Ala Gly Ser Pro Gly Gln Pro Gly Ala Arg Gly Glu Pro  
 115 120 125

Gly Gln Ser Gly Ser Pro Gly Gln Pro Gly Leu Ala Gly Arg Thr Gly  
 130 135 140

Pro Ser Gly Glu Arg Gly Asp Lys Gly Asn Asp Gly Gln Ser Gly Pro

145

150

155

160

Pro Gly Pro Pro Gly Pro Ala Gly Pro Ala Gly Gln Ser Gly Ile Leu  
 165 170 175

Gly Leu Ala Gly Gly Ser Gly Pro Arg Gly Pro Gly Gly Pro Ala Gly  
 180 185 190

Pro Pro Gly Ala Ala Gly Ser Arg Gly Pro Ala Gly Lys Ser Gly Asp  
 195 200 205

Arg Gly Ser Pro Gly Ala Val Gly Pro Ala Gly Asn Pro Gly Pro Ala  
 210 215 220

Gly Glu Asn Gly Met Pro Gly Ser Asp Gly Asn Asp Gly Ala Pro Gly  
 225 230 235 240

Pro Gln Gly Ser Arg Gly Glu Lys Gly Asp Thr Gly Ala Ser Gly Ala  
 245 250 255

Asn Gly Ser Pro Gly Ala Pro Gly Pro Ile Gly Ala Pro Gly Ala Ala  
 260 265 270

Gly Ala Ser Gly Pro Arg Gly Glu Thr Gly Ser Thr  
 275 280

&lt;210&gt; 25

&lt;211&gt; 420

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 25

gttccccgct ccgctgaatg gctccagcca aatgcctgga aatccacccc gcctgccctt 60  
 caatgaccgg ttcttcgtgg tggagacgct gtgtatttgt tggttctcct ttgagctgct 120  
 ggtacgcctc ctggctctgca caagcaaggc tatcttcttc aagaacgtga tgaacctcat 180  
 cgattttgtg gctatccttc cctactttgt ggcactgggc accgagctgg cccggcagcg 240  
 aggggtgggc cagcaggcca tgcactggc catcctgaga gtcatccgat tggtgctgt 300  
 cttccgcattt ttcaagctgt cccggcactc aaaggccctg caaatcttg gccagacgct 360  
 tcgggcctcc atgcgtgagc tgggcctcctt catcttttc ctcttcatcg gtgtggccct 420

&lt;210&gt; 26

&lt;211&gt; 420

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 26

gttccccgtt ccgctgaatggctccagccaaatgcctggaaatccacccgcctgccctt 60  
 caatgaccggttcttcgtggggagacgctgtgtattgttggttctcttttagctgtct 120  
 ggtacgcctcctggctctgtcaagcaaggctatcttcctaaagaacgtgatgaaacctcat 180  
 cgatttgtgtatcccttcctactttgtggcactggcaccgagctggcccgagcg 240  
 aggggtggccagcaggccatgtcaactggccatcctgaga gtcatccatgttgcggtgt 300  
 cttccgcatttcaagctgtccggcactcaaaggcctgcaaatcttggccagacgct 360  
 tcgggcctccatgcgtgagctggccttcatcttttcctcttcatcggtgtggcctt 420

<210> 27

<211> 539

<212> PRT

<213> Homo sapiens

<400> 27

Thr Gly Lys Ala Gln Ser Arg Arg Gly Arg Arg Arg Arg Gly Arg  
 1 5 10 15

Ala Gly Arg Ala Ser Arg Gln Arg Ala Arg Gly Arg Pro Val Ala Leu  
 20 25 30

Arg Pro Ala Gly Val Thr Val Pro Pro Pro Ser Arg Pro Ser Arg Pro  
 35 40 45

Ala Gly Leu Phe Tyr Ala Arg Thr Pro Asp Thr Gly His Arg Ala Gly  
 50 55 60

Ala Ala Val Gly Ala Thr Arg Arg Phe Ala Gly Arg Arg Gly Cys Ala  
 65 70 75 80

Arg His Gly Ala Ala Val Pro Ala Ala Pro Cys Gly Cys Cys Glu Arg  
 85 90 95

Leu Val Leu Asn Val Ala Gly Leu Arg Phe Glu Thr Arg Ala Arg Thr  
 100 105 110

Leu Gly Arg Phe Pro Asp Thr Leu Leu Gly Asp Pro Ala Arg Arg Gly  
 115 120 125

Arg Phe Tyr Asp Asp Ala Arg Arg Glu Tyr Phe Phe Asp Arg His Arg  
 130 135 140

Pro Ser Phe Asp Ala Val Leu Tyr Tyr Tyr Gln Ser Gly Gly Arg Leu  
 145 150 155 160

Arg Arg Pro Ala His Val Pro Leu Asp Val Phe Leu Glu Glu Val Ala  
 165 170 175

Phe Tyr Gly Leu Gly Ala Ala Ala Leu Ala Arg Leu Arg Glu Asp Glu  
 180 185 190  
  
 Gly Cys Pro Val Pro Pro Glu Arg Pro Leu Pro Arg Arg Ala Phe Ala  
 195 200 205  
  
 Arg Gln Leu Trp Leu Leu Phe Glu Phe Pro Glu Ser Ser Gln Ala Ala  
 210 215 220  
  
 Arg Val Leu Ala Val Val Ser Val Leu Val Ile Leu Val Ser Ile Val  
 225 230 235 240  
  
 Val Phe Cys Leu Glu Thr Leu Pro Asp Phe Arg Asp Asp Arg Asp Gly  
 245 250 255  
  
 Thr Gly Leu Ala Ala Ala Ala Ala Gly Pro Val Phe Pro Ala Pro  
 260 265 270  
  
 Leu Asn Gly Ser Ser Gln Met Pro Gly Asn Pro Pro Arg Leu Pro Phe  
 275 280 285  
  
 Asn Asp Pro Phe Phe Val Val Glu Thr Leu Cys Ile Cys Trp Phe Ser  
 290 295 300  
  
 Phe Glu Leu Leu Val Arg Leu Leu Val Cys Pro Ser Lys Ala Ile Phe  
 305 310 315 320  
  
 Phe Lys Asn Val Met Asn Leu Ile Asp Phe Val Ala Ile Leu Pro Tyr  
 325 330 335  
  
 Phe Val Ala Leu Gly Thr Glu Leu Ala Arg Gln Arg Gly Val Gly Gln  
 340 345 350  
  
 Gln Ala Met Ser Leu Ala Ile Leu Arg Val Ile Arg Leu Val Arg Val  
 355 360 365  
  
 Phe Arg Ile Phe Lys Leu Ser Arg His Ser Lys Gly Leu Gln Ile Leu  
 370 375 380  
  
 Gly Gln Thr Leu Arg Ala Ser Met Arg Glu Leu Gly Leu Leu Ile Phe  
 385 390 395 400  
  
 Phe Leu Phe Ile Gly Val Val Leu Phe Ser Ser Ala Val Tyr Phe Ala  
 405 410 415  
  
 Glu Val Asp Arg Val Asp Ser His Phe Thr Ser Ile Pro Glu Ser Phe  
 420 425 430

Trp Trp Ala Val Val Thr Met Thr Thr Val Gly Tyr Gly Asp Met Ala  
 435 440 445

Pro Val Thr Val Gly Gly Lys Ile Val Gly Ser Leu Cys Ala Ile Ala  
 450 455 460

Gly Val Leu Thr Ile Ser Leu Pro Val Pro Val Ile Val Ser Asn Phe  
 465 470 475 480

Ser Tyr Phe Tyr His Arg Glu Thr Glu Gly Glu Glu Ala Gly Met Phe  
 485 490 495

Ser His Val Asp Met Gln Pro Cys Gly Pro Leu Glu Gly Lys Ala Asn  
 500 505 510

Gly Gly Leu Val Asp Gly Glu Val Pro Glu Leu Pro Pro Pro Leu Trp  
 515 520 525

Ala Pro Pro Arg Glu His Leu Val Thr Glu Val  
 530 535

<210> 28

<211> 530

<212> PRT

<213> Mus musculus

<400> 28

Thr Arg Lys Ala Gln Glu Ile His Gly Lys Ala Pro Gly Gly Ser Val  
 1 5 10 15

Ser Thr Gly Val Gly Thr Ala Glu Gly Ala Pro Ser Pro Ala Gly Val  
 20 25 30

Thr Pro Pro Pro Pro Arg Pro Gly Arg Thr Phe His Ala Ile Phe  
 35 40 45

Thr Arg Arg His Arg Thr Pro Asp Trp Gly Gly Cys Gly Val Gly Ala  
 50 55 60

Thr Arg Pro Phe Thr Gly Arg Pro Gly Cys Ala Arg His Gly Ala Thr  
 65 70 75 80

Val Pro Ala Ala Leu Arg Cys Cys Glu Arg Leu Val Leu Asn Val Ala  
 85 90 95

Gly Leu Arg Phe Glu Thr Arg Ala Arg Thr Leu Gly Arg Phe Pro Asp  
 100 105 110

Thr Leu Leu Gly Asp Pro Val Arg Arg Ser Arg Phe Tyr Asp Gly Ala  
 115 120 125  
  
 Arg Ala Glu Tyr Phe Phe Asp Arg His Arg Pro Ser Phe Asp Ala Val  
 130 135 140  
  
 Leu Tyr Tyr Tyr Gln Ser Gly Gly Arg Leu Arg Arg Pro Ala His Val  
 145 150 155 160  
  
 Pro Leu Asp Val Phe Leu Glu Glu Val Ser Phe Tyr Gly Leu Gly Arg  
 165 170 175  
  
 Arg Leu Ala Arg Leu Arg Glu Asp Glu Gly Cys Ala Val Ala Glu Arg  
 180 185 190  
  
 Pro Leu Pro Pro Pro Phe Ala Arg Gln Leu Trp Leu Leu Phe Glu Phe  
 195 200 205  
  
 Pro Glu Ser Ser Gln Ala Ala Arg Val Leu Ala Val Val Ser Val Leu  
 210 215 220  
  
 Val Ile Leu Val Ser Ile Val Val Phe Cys Leu Glu Thr Leu Pro Asp  
 225 230 235 240  
  
 Phe Arg Asp Asp Arg Asp Asp Pro Gly Leu Ala Pro Val Ala Ala Ala  
 245 250 255  
  
 Thr Gly Ser Phe Leu Ala Arg Leu Asn Gly Ser Ser Pro Met Pro Gly  
 260 265 270  
  
 Ala Pro Pro Arg Gln Pro Phe Asn Asp Pro Phe Phe Val Val Glu Thr  
 275 280 285  
  
 Leu Cys Ile Cys Trp Phe Ser Phe Glu Leu Leu Val His Leu Val Ala  
 290 295 300  
  
 Cys Pro Ser Lys Ala Val Phe Phe Lys Asn Val Met Asn Leu Ile Asp  
 305 310 315 320  
  
 Phe Val Ala Ile Leu Pro Tyr Phe Val Ala Leu Gly Thr Glu Leu Ala  
 325 330 335  
  
 Arg Gln Arg Gly Val Gly Gln Pro Ala Met Ser Leu Ala Ile Leu Arg  
 340 345 350  
  
 Val Ile Arg Leu Val Arg Val Phe Arg Ile Phe Lys Leu Ser Arg His  
 355 360 365

Ser Lys Gly Leu Gln Ile Leu Gly Gln Thr Leu Arg Ala Ser Met Arg  
 370 375 380

Glu Leu Gly Leu Leu Ile Phe Phe Leu Phe Ile Gly Val Val Leu Phe  
 385 390 395 400

Ser Ser Ala Val Tyr Phe Ala Glu Val Asp Arg Val Asp Thr His Phe  
 405 410 415

Thr Ser Ile Pro Glu Ser Phe Trp Trp Ala Val Val Thr Met Thr Thr  
 420 425 430

Val Gly Tyr Gly Asp Met Ala Pro Val Thr Val Gly Gly Lys Ile Val  
 435 440 445

Gly Ser Leu Cys Ala Ile Ala Gly Val Leu Thr Ile Ser Leu Pro Val  
 450 455 460

Pro Val Ile Val Ser Asn Phe Ser Tyr Phe Tyr His Arg Glu Thr Glu  
 465 470 475 480

Gly Glu Glu Ala Gly Met Tyr Ser His Val Asp Thr Gln Pro Cys Gly  
 485 490 495

Thr Leu Glu Gly Lys Ala Asn Gly Gly Leu Val Asp Ser Glu Val Pro  
 500 505 510

Glu Leu Leu Pro Pro Leu Trp Pro Pro Ala Gly Lys His Met Val Thr  
 515 520 525

Glu Val  
 530

<210> 29  
 <211> 425  
 <212> PRT  
 <213> Homo sapiens

<400> 29  
 Gly Arg Arg Gly Cys Ala Arg His Gly Ala Ala Val Pro Ala Ala Pro  
 1 5 10 15

Cys Gly Cys Cys Glu Arg Leu Val Leu Asn Val Ala Gly Leu Arg Phe  
 20 25 30

Glu Thr Arg Ala Arg Thr Leu Gly Arg Phe Pro Asp Thr Leu Leu Gly

35	40	45
Asp Pro Ala Arg Arg Gly Arg Phe Tyr Asp Asp Ala Arg Arg Glu Tyr		
50	55	60
Phe Phe Asp Arg His Arg Pro Ser Phe Asp Ala Val Leu Tyr Tyr Tyr		
65	70	75
Gln Ser Gly Gly Arg Leu Arg Arg Pro Ala His Val Pro Leu Asp Val		
85	90	95
Phe Leu Glu Glu Val Ala Phe Tyr Gly Leu Gly Ala Ala Ala Leu Ala		
100	105	110
Arg Leu Arg Glu Asp Glu Gly Cys Pro Val Pro Pro Glu Arg Pro Leu		
115	120	125
Pro Arg Arg Ala Phe Ala Arg Gln Leu Trp Leu Leu Phe Glu Phe Pro		
130	135	140
Glu Ser Ser Gln Ala Ala Arg Val Leu Ala Val Val Ser Val Leu Val		
145	150	155
Ile Leu Val Ser Ile Val Val Phe Cys Leu Glu Thr Leu Pro Asp Phe		
165	170	175
Arg Asp Asp Arg Asp Gly Thr Gly Leu Ala Ala Ala Ala Ala Gly		
180	185	190
Pro Val Phe Pro Ala Pro Leu Asn Gly Ser Ser Gln Met Pro Gly Asn		
195	200	205
Pro Pro Arg Leu Pro Phe Asn Asp Pro Phe Phe Val Val Glu Thr Leu		
210	215	220
Cys Ile Cys Trp Phe Ser Phe Glu Leu Leu Val Arg Leu Leu Val Cys		
225	230	235
240		
Pro Ser Lys Ala Ile Phe Phe Lys Asn Val Met Asn Leu Ile Asp Phe		
245	250	255
Val Ala Ile Leu Pro Tyr Phe Val Ala Leu Gly Thr Glu Leu Ala Arg		
260	265	270
Gln Arg Gly Val Gly Gln Gln Ala Met Ser Leu Ala Ile Leu Arg Val		
275	280	285
Ile Arg Leu Val Arg Val Phe Arg Ile Phe Lys Leu Ser Arg His Ser		

290

295

300

Lys Gly Leu Gln Ile Leu Gly Gln Thr Leu Arg Ala Ser Met Arg Glu  
 305 310 315 320

Leu Gly Leu Leu Ile Phe Phe Leu Phe Ile Gly Val Val Leu Phe Ser  
 325 330 335

Ser Ala Val Tyr Phe Ala Glu Val Asp Arg Val Asp Ser His Phe Thr  
 340 345 350

Ser Ile Pro Glu Ser Phe Trp Trp Ala Val Val Thr Met Thr Thr Val  
 355 360 365

Gly Tyr Gly Asp Met Ala Pro Val Thr Val Gly Gly Lys Ile Val Gly  
 370 375 380

Ser Leu Cys Ala Ile Ala Gly Val Leu Thr Ile Ser Leu Pro Val Pro  
 385 390 395 400

Val Ile Val Ser Asn Phe Ser Tyr Phe Tyr His Arg Glu Thr Glu Gly  
 405 410 415

Glu Glu Ala Gly Met Phe Ser His Val  
 420 425

<210> 30  
 <211> 424  
 <212> PRT  
 <213> Homo sapiens

<400> 30  
 Gly Gly Gly Gly Cys Asp Arg Tyr Glu Pro Leu Pro Pro Ser Leu Pro  
 1 5 10 15

Ala Ala Gly Glu Gln Asp Cys Cys Gly Glu Arg Val Val Ile Asn Ile  
 20 25 30

Ser Gly Leu Arg Phe Glu Thr Gln Leu Lys Thr Leu Cys Gln Phe Pro  
 35 40 45

Glu Thr Leu Leu Gly Asp Pro Lys Arg Arg Met Arg Tyr Phe Asp Pro  
 50 55 60

Leu Arg Asn Glu Tyr Phe Phe Asp Arg Asn Arg Pro Ser Phe Asp Ala  
 65 70 75 80

Ile Leu Tyr Tyr Tyr Gln Ser Gly Gly Arg Ile Arg Arg Pro Val Asn  
 85 90 95  
  
 Val Pro Ile Asp Ile Phe Ser Glu Glu Ile Arg Phe Tyr Gln Leu Gly  
 100 105 110  
  
 Glu Glu Ala Met Glu Lys Phe Arg Glu Asp Glu Gly Phe Leu Arg Glu  
 115 120 125  
  
 Glu Glu Arg Pro Leu Pro Arg Arg Asp Phe Gln Arg Gln Val Trp Leu  
 130 135 140  
  
 Leu Phe Glu Tyr Pro Glu Ser Ser Gly Pro Ala Arg Gly Ile Ala Ile  
 145 150 155 160  
  
 Val Ser Val Leu Val Ile Leu Ile Ser Ile Val Ile Phe Cys Leu Glu  
 165 170 175  
  
 Thr Leu Pro Glu Phe Arg Asp Glu Lys Asp Tyr Pro Ala Ser Thr Ser  
 180 185 190  
  
 Gln Asp Ser Phe Glu Ala Ala Gly Asn Ser Thr Ser Gly Ser Arg Ala  
 195 200 205  
  
 Gly Ala Ser Ser Phe Ser Asp Pro Phe Phe Val Val Glu Thr Leu Cys  
 210 215 220  
  
 Ile Ile Trp Phe Ser Phe Glu Leu Leu Val Arg Phe Phe Ala Cys Pro  
 225 230 235 240  
  
 Ser Lys Ala Thr Phe Ser Arg Asn Ile Met Asn Leu Ile Asp Ile Val  
 245 250 255  
  
 Ala Ile Ile Pro Tyr Phe Ile Thr Leu Gly Thr Glu Leu Ala Glu Arg  
 260 265 270  
  
 Gln Gly Asn Gly Gln Gln Ala Met Ser Leu Ala Ile Leu Arg Val Ile  
 275 280 285  
  
 Arg Leu Val Arg Val Phe Arg Ile Phe Lys Leu Ser Arg His Ser Lys  
 290 295 300  
  
 Gly Leu Gln Ile Leu Gly Gln Thr Leu Lys Ala Ser Met Arg Glu Leu  
 305 310 315 320  
  
 Gly Leu Leu Ile Phe Phe Leu Phe Ile Gly Val Ile Leu Phe Ser Ser  
 325 330 335

Ala Val Tyr Phe Ala Glu Ala Asp Asp Pro Thr Ser Gly Phe Ser Ser  
 340 345 350

Ile Pro Asp Ala Phe Trp Trp Ala Val Val Thr Met Thr Thr Val Gly  
 355 360 365

Tyr Gly Asp Met His Pro Val Thr Ile Gly Gly Lys Ile Val Gly Ser  
 370 375 380

Leu Cys Ala Ile Ala Gly Val Leu Thr Ile Ala Leu Pro Val Pro Val  
 385 390 395 400

Ile Val Ser Asn Phe Asn Tyr Phe Tyr His Arg Glu Thr Glu Gly Glu  
 405 410 415

Glu Gln Ser Gln Tyr Met His Val  
 420

<210> 31

<211> 532

<212> PRT

<213> Mus musculus

<400> 31

Met Thr Thr Arg Lys Ala Gln Glu Ile His Gly Lys Ala Pro Gly Gly  
 1 5 10 15

Ser Val Ser Thr Gly Val Gly Thr Ala Glu Gly Ala Pro Ser Pro Ala  
 20 25 30

Gly Val Thr Pro Pro Pro Pro Arg Pro Gly Arg Thr Phe His Ala  
 35 40 45

Ile Phe Thr Arg Arg His Arg Thr Pro Asp Trp Gly Gly Cys Gly Val  
 50 55 60

Gly Ala Thr Arg Pro Phe Thr Gly Arg Pro Gly Cys Ala Arg His Gly  
 65 70 75 80

Ala Thr Val Pro Ala Ala Leu Arg Cys Cys Glu Arg Leu Val Leu Asn  
 85 90 95

Val Ala Gly Leu Arg Phe Glu Thr Arg Ala Arg Thr Leu Gly Arg Phe  
 100 105 110

Pro Asp Thr Leu Leu Gly Asp Pro Val Arg Arg Ser Arg Phe Tyr Asp  
 115 120 125

Gly Ala Arg Ala Glu Tyr Phe Phe Asp Arg His Arg Pro Ser Phe Asp  
 130 135 140

Ala Val Leu Tyr Tyr Tyr Gln Ser Gly Gly Arg Leu Arg Arg Pro Ala  
 145 150 155 160

His Val Pro Leu Asp Val Phe Leu Glu Glu Val Ser Phe Tyr Gly Leu  
 165 170 175

Gly Arg Arg Leu Ala Arg Leu Arg Glu Asp Glu Gly Cys Ala Val Ala  
 180 185 190

Glu Arg Pro Leu Pro Pro Phe Ala Arg Gln Leu Trp Leu Leu Phe  
 195 200 205

Glu Phe Pro Glu Ser Ser Gln Ala Ala Arg Val Leu Ala Val Val Ser  
 210 215 220

Val Leu Val Ile Leu Val Ser Ile Val Val Phe Cys Leu Glu Thr Leu  
 225 230 235 240

Pro Asp Phe Arg Asp Asp Arg Asp Asp Pro Gly Leu Ala Pro Val Ala  
 245 250 255

Ala Ala Thr Gly Ser Phe Leu Ala Arg Leu Asn Gly Ser Ser Pro Met  
 260 265 270

Pro Gly Ala Pro Pro Arg Gln Pro Phe Asn Asp Pro Phe Phe Val Val  
 275 280 285

Glu Thr Leu Cys Ile Cys Trp Phe Ser Phe Glu Leu Leu Val His Leu  
 290 295 300

Val Ala Cys Pro Ser Lys Ala Val Phe Phe Lys Asn Val Met Asn Leu  
 305 310 315 320

Ile Asp Phe Val Ala Ile Leu Pro Tyr Phe Val Ala Leu Gly Thr Glu  
 325 330 335

Leu Ala Arg Gln Arg Gly Val Gly Gln Pro Ala Met Ser Leu Ala Ile  
 340 345 350

Leu Arg Val Ile Arg Leu Val Arg Val Phe Arg Ile Phe Lys Leu Ser  
 355 360 365

Arg His Ser Lys Gly Leu Gln Ile Leu Gly Gln Thr Leu Arg Ala Ser  
 370 375 380

Met Arg Glu Leu Gly Leu Leu Ile Phe Phe Leu Phe Ile Gly Val Val  
 385 390 395 400

Leu Phe Ser Ser Ala Val Tyr Phe Ala Glu Val Asp Arg Val Asp Thr  
 405 410 415

His Phe Thr Ser Ile Pro Glu Ser Phe Trp Trp Ala Val Val Thr Met  
 420 425 430

Thr Thr Val Gly Tyr Gly Asp Met Ala Pro Val Thr Val Gly Gly Lys  
 435 440 445

Ile Val Gly Ser Leu Cys Ala Ile Ala Gly Val Leu Thr Ile Ser Leu  
 450 455 460

Pro Val Pro Val Ile Val Ser Asn Phe Ser Tyr Phe Tyr His Arg Glu  
 465 470 475 480

Thr Glu Gly Glu Ala Gly Met Tyr Ser His Val Asp Thr Gln Pro  
 485 490 495

Cys Gly Thr Leu Glu Gly Lys Ala Asn Gly Gly Leu Val Asp Ser Glu  
 500 505 510

Val Pro Glu Leu Leu Pro Pro Leu Trp Pro Pro Ala Gly Lys His Met  
 515 520 525

Val Thr Glu Val  
 530

<210> 32  
 <211> 523  
 <212> PRT  
 <213> Homo sapiens

<400> 32  
 Met Thr Val Val Pro Gly Asp His Leu Leu Glu Pro Glu Val Ala Asp  
 1 5 10 15

Gly Gly Gly Ala Pro Pro Gln Gly Gly Cys Gly Gly Gly Cys Asp  
 20 25 30

Arg Tyr Glu Pro Leu Pro Pro Ser Leu Pro Ala Ala Gly Glu Gln Asp  
 35 40 45

Cys Cys Gly Glu Arg Val Val Ile Asn Ile Ser Gly Leu Arg Phe Glu

50

55

60

Thr Gln Leu Lys Thr Leu Cys Gln Phe Pro Glu Thr Leu Leu Gly Asp  
 65 70 75 80

Pro Lys Arg Arg Met Arg Tyr Phe Asp Pro Leu Arg Asn Glu Tyr Phe  
 85 90 95

Phe Asp Arg Asn Arg Pro Ser Phe Asp Ala Ile Leu Tyr Tyr Tyr Gln  
 100 105 110

Ser Gly Gly Arg Ile Arg Arg Pro Val Asn Val Pro Ile Asp Ile Phe  
 115 120 125

Ser Glu Glu Ile Arg Phe Tyr Gln Leu Gly Glu Glu Ala Met Glu Lys  
 130 135 140

Phe Arg Glu Asp Glu Gly Phe Leu Arg Glu Glu Arg Pro Leu Pro  
 145 150 155 160

Arg Arg Asp Phe Gln Arg Gln Val Trp Leu Leu Phe Glu Tyr Pro Glu  
 165 170 175

Ser Ser Gly Pro Ala Arg Gly Ile Ala Ile Val Ser Val Leu Val Ile  
 180 185 190

Leu Ile Ser Ile Val Ile Phe Cys Leu Glu Thr Leu Pro Glu Phe Arg  
 195 200 205

Asp Glu Lys Asp Tyr Pro Ala Ser Thr Ser Gln Asp Ser Phe Glu Ala  
 210 215 220

Ala Gly Asn Ser Thr Ser Gly Ser Arg Ala Gly Ala Ser Ser Phe Ser  
 225 230 235 240

Asp Pro Phe Phe Val Val Glu Thr Leu Cys Ile Ile Trp Phe Ser Phe  
 245 250 255

Glu Leu Leu Val Arg Phe Phe Ala Cys Pro Ser Lys Ala Thr Phe Ser  
 260 265 270

Arg Asn Ile Met Asn Leu Ile Asp Ile Val Ala Ile Ile Pro Tyr Phe  
 275 280 285

Ile Thr Leu Gly Thr Glu Leu Ala Glu Arg Gln Gly Asn Gly Gln Gln  
 290 295 300

Ala Met Ser Leu Ala Ile Leu Arg Val Ile Arg Leu Val Arg Val Phe

305

310

315

320

Arg Ile Phe Lys Leu Ser Arg His Ser Lys Gly Leu Gln Ile Leu Gly  
 325 330 335

Gln Thr Leu Lys Ala Ser Met Arg Glu Leu Gly Leu Leu Ile Phe Phe  
 340 345 350

Leu Phe Ile Gly Val Ile Leu Phe Ser Ser Ala Val Tyr Phe Ala Glu  
 355 360 365

Ala Asp Asp Pro Thr Ser Gly Phe Ser Ser Ile Pro Asp Ala Phe Trp  
 370 375 380

Trp Ala Val Val Thr Met Thr Thr Val Gly Tyr Gly Asp Met His Pro  
 385 390 395 400

Val Thr Ile Gly Gly Lys Ile Val Gly Ser Leu Cys Ala Ile Ala Gly  
 405 410 415

Val Leu Thr Ile Ala Leu Pro Val Pro Val Ile Val Ser Asn Phe Asn  
 420 425 430

Tyr Phe Tyr His Arg Glu Thr Glu Gly Glu Glu Gln Ser Gln Tyr Met  
 435 440 445

His Val Gly Ser Cys Gln His Leu Ser Ser Ser Ala Glu Glu Leu Arg  
 450 455 460

Lys Ala Arg Ser Asn Ser Thr Leu Ser Lys Ser Glu Tyr Met Val Ile  
 465 470 475 480

Glu Glu Gly Gly Met Asn His Ser Ala Phe Pro Gln Thr Pro Phe Lys  
 485 490 495

Thr Gly Asn Ser Thr Ala Thr Cys Thr Thr Asn Asn Asn Pro Asn Ser  
 500 505 510

Cys Val Asn Ile Lys Lys Ile Phe Thr Asp Val  
 515 520

&lt;210&gt; 33

&lt;211&gt; 525

&lt;212&gt; PRT

&lt;213&gt; Rattus norvegicus

&lt;400&gt; 33

Met Thr Val Val Pro Gly Asp His Leu Leu Glu Pro Glu Ala Ala Gly  
 1 5 10 15

Gly Gly Gly Gly Asp Pro Pro Gln Gly Gly Cys Val Ser Gly Gly Gly  
 20 25 30

Cys Asp Arg Tyr Glu Pro Leu Pro Pro Ala Leu Pro Ala Ala Gly Glu  
 35 40 45

Gln Asp Cys Cys Gly Glu Arg Val Val Ile Asn Ile Ser Gly Leu Arg  
 50 55 60

Phe Glu Thr Gln Leu Lys Thr Leu Cys Gln Phe Pro Glu Thr Leu Leu  
 65 70 75 80

Gly Asp Pro Lys Arg Arg Met Arg Tyr Phe Asp Pro Leu Arg Asn Glu  
 85 90 95

Tyr Phe Phe Asp Arg Asn Arg Pro Ser Phe Asp Ala Ile Leu Tyr Tyr  
 100 105 110

Tyr Gln Ser Gly Gly Arg Ile Arg Arg Pro Val Asn Val Pro Ile Asp  
 115 120 125

Ile Phe Ser Glu Glu Ile Arg Phe Tyr Gln Leu Gly Glu Glu Ala Met  
 130 135 140

Glu Lys Phe Arg Glu Asp Glu Gly Phe Leu Arg Glu Glu Glu Arg Pro  
 145 150 155 160

Leu Pro Arg Arg Asp Phe Gln Arg Gln Val Trp Leu Leu Phe Glu Tyr  
 165 170 175

Pro Glu Ser Ser Arg Pro Ala Arg Gly Ile Ala Ile Val Ser Val Leu  
 180 185 190

Val Ile Leu Ile Ser Ile Val Ile Phe Cys Leu Glu Thr Leu Pro Glu  
 195 200 205

Phe Arg Asp Glu Lys Asp Tyr Pro Ala Ser Pro Ser Gln Asp Val Phe  
 210 215 220

Glu Ala Ala Asn Asn Ser Thr Ser Gly Ala Ser Ser Gly Ala Ser Ser  
 225 230 235 240

Phe Ser Asp Pro Phe Phe Val Val Glu Thr Leu Cys Ile Ile Trp Phe  
 245 250 255

Ser Phe Glu Leu Leu Val Arg Phe Phe Ala Cys Pro Ser Lys Ala Thr  
 260 265 270  
  
 Phe Ser Arg Asn Ile Met Asn Leu Ile Asp Ile Val Ala Ile Ile Pro  
 275 280 285  
  
 Tyr Phe Ile Thr Leu Gly Thr Glu Leu Ala Glu Arg Gln Gly Asn Gly  
 290 295 300  
  
 Gln Gln Ala Met Ser Leu Ala Ile Leu Arg Val Ile Arg Leu Val Arg  
 305 310 315 320  
  
 Val Phe Arg Ile Phe Lys Leu Ser Arg His Ser Lys Gly Leu Gln Ile  
 325 330 335  
  
 Leu Gly Gln Thr Leu Lys Ala Ser Met Arg Glu Leu Gly Leu Leu Ile  
 340 345 350  
  
 Phe Phe Leu Phe Ile Gly Val Ile Leu Phe Ser Ser Ala Val Tyr Phe  
 355 360 365  
  
 Ala Glu Ala Asp Asp Pro Ser Ser Gly Phe Asn Ser Ile Pro Asp Ala  
 370 375 380  
  
 Phe Trp Trp Ala Val Val Thr Met Thr Thr Val Gly Tyr Gly Asp Met  
 385 390 395 400  
  
 His Pro Val Thr Ile Gly Gly Lys Ile Val Gly Ser Leu Cys Ala Ile  
 405 410 415  
  
 Ala Gly Val Leu Thr Ile Ala Leu Pro Val Pro Val Ile Val Ser Asn  
 420 425 430  
  
 Phe Asn Tyr Phe Tyr His Arg Glu Thr Glu Gly Glu Glu Gln Ala Gln  
 435 440 445  
  
 Tyr Met His Val Gly Ser Cys Gln His Leu Ser Ser Ser Ala Glu Glu  
 450 455 460  
  
 Leu Arg Lys Ala Arg Ser Asn Ser Thr Leu Ser Lys Ser Glu Tyr Met  
 465 470 475 480  
  
 Val Ile Glu Glu Gly Gly Met Asn His Ser Ala Phe Pro Gln Thr Pro  
 485 490 495  
  
 Phe Lys Thr Gly Asn Ser Thr Ala Thr Cys Thr Thr Asn Asn Asn Pro  
 500 505 510

Asn Ser Cys Val Asn Ile Lys Ile Phe Thr Asp Val  
 515 520 525

<210> 34  
 <211> 360  
 <212> DNA  
 <213> Homo sapiens

<400> 34  
 agtttggatt tgcttatgaa aaagataaaaa ggaaaagacc tacagcttt agaaatgaac 60  
 aaagagaatg aagtattgaa aatcaagctg caagcctcca gagaagcagg agcagcagct 120  
 ctgagaaacg tggcccgag attatttcaa aactacaaa cgcaatctga agaagtgaga 180  
 aagaagcagg agggcagtaa acaattactc caggttaaca agcttgaaaa agaacagaaa 240  
 ttgaaacaac atgttggaaaa tctgaatcaa gttgctgaaa aacttgaaga aaaacacagt 300  
 caaattacag aattggagaa ccttgtacag agaatggaaa aggaaaagag aacactacta 360

<210> 35  
 <211> 360  
 <212> DNA  
 <213> Homo sapiens

<400> 35  
 agtttggatt tgcttatgaa aaagataaaaa ggaaaagacc tacagcttt agaaatgaac 60  
 aaagagaatg aagtattgaa aatcaagctg caagcctcca gagaagcagg agcagcagct 120  
 ctgagaaacg tggcccgag attatttcaa aactacaaa cgcaatctga agaagtgaga 180  
 aagaagcagg aggacagtaa acaattactc caggttaaca agcttgaaaa agaacagaaa 240  
 ttgaaacaac atgttggaaaa tctgaatcaa gttgctgaaa aacttgaaga aaaacacagt 300  
 caaattacag aattggagaa ccttgtacag agaatggaaa aggaaaagag aacactacta 360

<210> 36  
 <211> 170  
 <212> PRT  
 <213> Homo sapiens

<400> 36  
 Ala Leu Arg Asn Val Ala Gln Arg Leu Phe Glu Asn Tyr Gln Thr Gln  
 1 5 10 15

Ser Glu Glu Val Arg Lys Lys Gln Glu Gly Ser Lys Gln Leu Leu Gln  
 20 25 30

Val Asn Lys Leu Glu Lys Glu Gln Lys Leu Lys Gln His Val Glu Asn  
 35 40 45

Leu Asn Gln Val Ala Glu Lys Leu Glu Glu Lys His Ser Gln Ile Thr

50

55

60

Glu Leu Glu Asn Leu Val Gln Arg Met Glu Lys Glu Lys Arg Thr Leu  
 65 70 75 80

Leu Glu Arg Lys Leu Ser Leu Glu Asn Lys Leu Leu Gln Leu Lys Ser  
 85 90 95

Ser Ala Thr Tyr Gly Lys Ser Cys Gln Asp Leu Gln Arg Glu Ile Ser  
 100 105 110

Ile Leu Gln Glu Gln Ile Ser His Leu Gln Phe Val Ile His Ser Gln  
 115 120 125

His Gln Asn Leu Arg Ser Val Ile Gln Glu Met Glu Gly Leu Lys Asn  
 130 135 140

Asn Leu Lys Glu Gln Asp Lys Arg Ile Glu Asn Leu Arg Glu Lys Val  
 145 150 155 160

Asn Ile Leu Glu Ala Gln Asn Lys Glu Leu  
 165 170

&lt;210&gt; 37

&lt;211&gt; 170

&lt;212&gt; PRT

&lt;213&gt; Bos taurus

&lt;400&gt; 37

Ser Leu Arg Lys Thr Val Gln Asp Leu Leu Val Lys Leu Gln Glu Ala  
 1 5 10 15

Glu Gln Gln His Gln Ser Asp Cys Ser Ala Phe Lys Val Thr Leu Ser  
 20 25 30

Gln Tyr Gln Arg Glu Ala Lys Gln Ser Gln Val Ala Leu Gln Arg Ala  
 35 40 45

Glu Asp Arg Ala Glu Gln Lys Glu Ala Glu Val Gly Glu Leu Gln Arg  
 50 55 60

Arg Leu Gln Gly Met Glu Thr Glu Tyr Gln Ala Ile Leu Ala Lys Val  
 65 70 75 80

Arg Glu Gly Glu Thr Ala Leu Glu Glu Leu Arg Ser Lys Asn Val Asp  
 85 90 95

Cys Gln Ala Glu Gln Glu Lys Ala Ala Asn Leu Glu Lys Glu Val Ala  
 100 105 110

Gly Leu Arg Glu Lys Ile His His Leu Asp Asp Met Leu Lys Ser Gln  
 115 120 125

Gln Arg Lys Val Arg Gln Met Ile Glu Gln Leu Gln Asn Ser Lys Ala  
 130 135 140

Val Ile Gln Ser Lys Asp Thr Thr Ile Gln Glu Leu Lys Glu Lys Ile  
 145 150 155 160

Ala Tyr Leu Glu Ala Glu Asn Leu Glu Met  
 165 170

<210> 38

<211> 1056

<212> DNA

<213> Homo sapiens

<400> 38

atgactttga ggctttaga agactggtgc agggggatgg acatgaaccc tcgaaaagcg 60  
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 gctggtttag ctcccttggg ggagtacaga ctgcttggaa ggatgttcag gaggatgag 180  
 aacaggaaag tagccttagt agggcttact gcggagacta gtcacgcctt ggtccctaag 240  
 gagataccgg gaaaaggggg tatctggaga gtgatctta agccccctga cccagataat 300  
 acatttttaa gcagattaaa tgaatttttgcgggagagg gcatgacagt ggttgagttg 360  
 agcagagctc ttggacatga aaatggctcc ttagacccag agcagggcat gatccggaa 420  
 atgtggccct ctatgttgc acaggcatta gaggcttcc agcctgcctt gcaatgttt 480  
 aagtataaaa agctgagagt gttctcgcc agggagtctc cagaaccagg agaagaagaa 540  
 ttggacgct ggttca tactactcag atgataaaagg cgtggcaggt gccagatgt 600  
 gagaagagaa ggcgattgtt agagagcctt cgaggccctt cacttgcgttattcgtgtc 660  
 ctcaagataaa acaatccctt aattactgtc gatgaatgtc tgcaggctt tgaggaggt 720  
 ttgggggtt cagataatcc tagggagttt caggtcaaat atctaaccac ttaccagaag 780  
 gatgaggaaa agttgtcggc ttatgtacta aggctggagc ctttgcgttaca gaagctggta 840  
 cagagaggag caatttgcgtt agatgttgc aatcaggccc gccttagacca agtcattgt 900  
 gggggcgttcc acaaaacaat tcgcagagag cttaatctgc cagaggatgg cccagccct 960  
 gtttcttgc agttattgtt actaataaaag gattatgagg cagctggaga ggaggaggcc 1020  
 cttctccagg caatatttgc aggttatttc acctgt 1056

<210> 39

<211> 321

<212> PRT

<213> Homo sapiens

<400> 39

Met	Thr	Leu	Arg	Leu	Leu	Glu	Asp	Trp	Cys	Arg	Gly	Met	Asp	Met	Asn
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Pro	Arg	Lys	Ala	Leu	Leu	Ile	Ala	Gly	Ile	Ser	Gln	Ser	Cys	Ser	Val
	20					25						30			
Ala	Glu	Ile	Glu	Glu	Ala	Leu	Gln	Ala	Gly	Leu	Ala	Pro	Leu	Gly	Glu
	35					40						45			
Tyr	Arg	Leu	Leu	Gly	Arg	Met	Phe	Arg	Arg	Asp	Glu	Asn	Arg	Lys	Val
	50					55						60			
Ala	Leu	Val	Gly	Leu	Thr	Ala	Glu	Thr	Ser	His	Ala	Leu	Val	Pro	Lys
	65					70						75			80
Glu	Ile	Pro	Gly	Lys	Gly	Ile	Trp	Arg	Val	Ile	Phe	Lys	Pro	Pro	
	85					90						95			
Asp	Pro	Asp	Asn	Thr	Phe	Leu	Ser	Arg	Leu	Asn	Glu	Phe	Leu	Ala	Gly
	100					105						110			
Glu	Gly	Met	Thr	Val	Gly	Glu	Leu	Ser	Arg	Ala	Leu	Gly	His	Glu	Asn
	115					120						125			
Gly	Ser	Leu	Asp	Pro	Glu	Gln	Gly	Met	Ile	Pro	Glu	Met	Trp	Ala	Pro
	130					135						140			
Met	Leu	Ala	Gln	Ala	Leu	Glu	Ala	Leu	Gln	Pro	Ala	Leu	Gln	Cys	Leu
	145					150						155			160
Lys	Tyr	Lys	Lys	Leu	Arg	Val	Phe	Ser	Gly	Arg	Glu	Ser	Pro	Glu	Pro
	165					170						175			
Gly	Glu	Glu	Glu	Phe	Gly	Arg	Trp	Met	Phe	His	Thr	Thr	Gln	Met	Ile
	180					185						190			
Lys	Ala	Trp	Gln	Val	Pro	Asp	Val	Glu	Lys	Arg	Arg	Leu	Leu	Glu	
	195					200						205			
Ser	Leu	Arg	Gly	Pro	Ala	Leu	Asp	Val	Ile	Arg	Val	Leu	Lys	Ile	Asn
	210					215						220			
Asn	Pro	Leu	Ile	Thr	Val	Asp	Glu	Cys	Leu	Gln	Ala	Leu	Glu	Val	
	225					230						235			240
Phe	Gly	Val	Thr	Asp	Asn	Pro	Arg	Glu	Leu	Gln	Val	Lys	Tyr	Leu	Thr
	245					250						255			

Thr Tyr Gln Lys Asp Glu Glu Lys Leu Ser Ala Tyr Val Leu Arg Leu  
 260 265 270

Glu Pro Leu Leu Gln Lys Leu Val Gln Arg Gly Ala Ile Glu Arg Asp  
 275 280 285

Ala Val Asn Gln Ala Arg Leu Asp Gln Val Ile Ala Gly Ala Val His  
 290 295 300

Lys Thr Ile Arg Arg Glu Leu Asn Leu Pro Glu Asp Gly Pro Ala Pro  
 305 310 315 320

Gly

<210> 40

<211> 318

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> (20)

<223> Wherein Xaa is any amino acid as defined in the  
 specification

<400> 40

Met Ala Met Thr Leu Leu Glu Asp Trp Cys Arg Gly Met Asp Val Asn  
 1 5 10 15

Ser Gln Arg Xaa Leu Leu Val Trp Gly Ile Pro Val Asn Cys Asp Glu  
 20 25 30

Ala Glu Ile Glu Glu Thr Leu Gln Ala Ala Met Pro Gln Val Ser Tyr  
 35 40 45

Arg Met Leu Gly Arg Met Phe Trp Arg Glu Glu Asn Ala Lys Ala Ala  
 50 55 60

Leu Leu Glu Leu Thr Gly Ala Val Asp Tyr Ala Ala Ile Pro Arg Glu  
 65 70 75 80

Met Pro Gly Lys Gly Val Trp Lys Val Leu Phe Lys Pro Pro Thr  
 85 90 95

Ser Asp Ala Glu Phe Leu Glu Arg Leu His Leu Phe Leu Ala Arg Glu  
 100 105 110

Gly Trp Thr Val Gln Asp Val Ala Arg Val Leu Gly Phe Gln Asn Pro  
 115 120 125  
  
 Thr Pro Thr Pro Gly Pro Glu Met Pro Ala Glu Met Leu Asn Tyr Ile  
 130 135 140  
  
 Leu Asp Asn Val Ile Gln Pro Leu Val Glu Ser Ile Trp Tyr Lys Arg  
 145 150 155 160  
  
 Leu Thr Leu Phe Ser Gly Lys Gly His Pro Arg Ala Trp Arg Gly Asn  
 165 170 175  
  
 Phe Asp Pro Trp Leu Glu His Thr Asn Glu Val Leu Glu Trp Gln  
 180 185 190  
  
 Val Ser Asp Val Glu Lys Arg Arg Arg Leu Met Glu Ser Leu Arg Gly  
 195 200 205  
  
 Pro Ala Ala Asp Val Ile Arg Ile Leu Lys Ser Asn Asn Pro Ala Ile  
 210 215 220  
  
 Thr Thr Ala Glu Cys Leu Lys Ala Leu Glu Gln Val Phe Gly Ser Val  
 225 230 235 240  
  
 Glu Ser Ser Arg Asp Ala Gln Ile Lys Phe Leu Asn Thr Tyr Gln Asn  
 245 250 255  
  
 Pro Gly Glu Lys Leu Ser Ala Tyr Val Ile Arg Leu Glu Pro Leu Leu  
 260 265 270  
  
 Gln Lys Val Val Glu Lys Gly Ala Ile Asp Lys Asp Asn Val Asn Gln  
 275 280 285  
  
 Ala Arg Leu Glu Gln Val Ile Ala Gly Ala Asn His Ser Gly Ala Ile  
 290 295 300  
  
 Arg Arg Gln Leu Trp Leu Thr Gly Ala Gly Glu Gly Pro Gly  
 305 310 315

<210> 41  
 <211> 120  
 <212> PRT  
 <213> Homo sapiens

<400> 41  
 Leu Arg Leu Leu Glu Asp Trp Cys Arg Gly Met Asp Met Asn Pro Arg

1

5

10

15

Lys Ala Leu Leu Ile Ala Gly Ile Ser Gln Ser Cys Ser Val Ala Glu  
 20 25 30

Ile Glu Glu Ala Leu Gln Ala Gly Leu Ala Pro Leu Gly Glu Tyr Arg  
 35 40 45

Leu Leu Gly Arg Met Phe Arg Arg Asp Glu Asn Arg Lys Val Ala Leu  
 50 55 60

Val Gly Leu Thr Ala Glu Thr Ser His Ala Leu Val Pro Lys Glu Ile  
 65 70 75 80

Pro Gly Lys Gly Gly Ile Trp Arg Val Ile Phe Lys Pro Pro Asp Pro  
 85 90 95

Asp Asn Thr Phe Leu Ser Arg Leu Asn Glu Phe Leu Ala Gly Glu Gly  
 100 105 110

Met Thr Val Gly Glu Leu Ser Arg  
 115 120

<210> 42  
 <211> 120  
 <212> PRT  
 <213> Homo sapiens

<400> 42  
 Leu Ala Leu Leu Glu Asp Trp Cys Arg Ile Met Ser Val Asp Glu Gln  
 1 5 10 15

Lys Ser Leu Met Val Thr Gly Ile Pro Ala Asp Phe Glu Ala Glu  
 20 25 30

Ile Gln Glu Val Leu Gln Glu Thr Leu Lys Ser Leu Gly Arg Tyr Arg  
 35 40 45

Leu Leu Gly Lys Ile Phe Arg Lys Gln Glu Asn Ala Asn Ala Val Leu  
 50 55 60

Leu Glu Leu Leu Glu Asp Thr Asp Val Ser Ala Ile Pro Ser Glu Val  
 65 70 75 80

Gln Gly Lys Gly Gly Val Trp Lys Val Ile Phe Lys Thr Pro Asn Gln  
 85 90 95

Asp Thr Glu Phe Leu Glu Arg Leu Asn Leu Phe Leu Glu Lys Glu Gly  
 100 105 110

Gln Thr Val Ser Gly Met Phe Arg  
 115 120

<210> 43  
 <211> 438  
 <212> DNA  
 <213> Homo sapiens

<400> 43  
 cacgctccgc acaccagcct ggcgcacca tggccaccc ttcagcagct ggaaggaaga 60  
 tggcgctgg cggacagcaa aggcttgcat gcatacatga agaaactagg agtggaaata 120  
 tctttgcgcata atatggcgc aatggccaaa ccagactgta tcattacttg tgatggccaa 180  
 aacctcacca taaaaactga gggactttg aaaacaacac agtttcttg taccctggga 240  
 gagaagtttgg aaggaaccac agctgttggc agaaaaactc agactgtctg cagcttaca 300  
 gatggtgcatttggccat tcaggagtgg gatggaaagg aaaacacaat aacaagaaaa 360  
 ttgaaagatg catcagtggt ggattgtgtc acgaacaatg tcacctgtac tcggatctat 420  
 gaaaaagtag aataaaaaa 438

<210> 44  
 <211> 444  
 <212> DNA  
 <213> Homo sapiens

<400> 44  
 ccctctctgc acgccagccc gcccgcaccc accatggcca cagttcagca gctggaaagg 60  
 agatggcgcc tgggtggacag caaaggctt gatgaataca tgaaggagct aggagtggga 120  
 atagcttgc gaaaaatggg cgcaatggcc aagccagatt gtatcatcac ttgtatgg 180  
 aaaaacctca ccataaaaaac tgagagcaact ttgaaaacaa cacagtttc ttgtaccctg 240  
 ggagagaagt ttgaaagaaac cacagctgat ggcagaaaaa ctcagactgt ctgcaacttt 300  
 acagatggtg cattggttca gcatcaggag tggatggga agggaaagcac aataacaaga 360  
 aaattgaaag atggaaatt agtggtggag tgtgtcatga acaatgtcac ctgtactcgg 420  
 atctatgaaa aagtagaata aaaa 444

<210> 45  
 <211> 403  
 <212> DNA  
 <213> Homo sapiens

<400> 45  
 ggccaccgtt cagcagctgg aaggaagatg ggcgcctggcg gacagcaaag gctttgatgc 60  
 atacatgaag aaacttaggag tggaaatatc tttgcgcata atggcgccaa tggccaaacc 120  
 agactgtatc atcacttgc atggccaaaaa cctcaccata aaaactgaga gcactttgaa 180

aacaacacag ttttcttgc a cctggaga gaagttgaa ggaaccacag ctgtggcag 240  
 aaaaactcg actgtctgca gctttacaga tggtgcatg gttccgcac aggagtggaa 300  
 tgggaaggaa aacacaataa caagaaaatt gaaagatgca tcagtggtgg attgtgtcac 360  
 gaacaatgtc acctgtactc ggatctatga aaaagtagaa taa 403

<210> 46  
 <211> 406  
 <212> DNA  
 <213> Homo sapiens

<400> 46  
 ggccacagtt cagcagctgg aaggaagatg gcgcctggtg gacagcaaag gctttatgt 60  
 atacatgaag gagctaggag tggaatagc tttgcgaaaa atgggcgcaa tggccaagcc 120  
 agattgtatc atcacttgc atggtaaaaaa cctcaccata aaaactgaga gcactttgaa 180  
 aacaacacag ttttcttgc a cctggaga gaagttgaa gaaaccacag ctgtggcag 240  
 aaaaactcg actgtctgca actttacaga tggtgcatg gttccgcac aggagtggaa 300  
 tgggaaggaa agcacaataa caagaaaatt gaaagatggg aaattatgtgg tggagtgtgt 360  
 catgaacaat gtcacctgtc ctcggatcta tgaaaaagta gaataa 406

<210> 47  
 <211> 133  
 <212> PRT  
 <213> Homo sapiens

<400> 47  
 Ala Thr Val Gln Gln Leu Glu Gly Arg Trp Arg Leu Ala Asp Ser Lys  
 1 5 10 15

Gly Phe Asp Ala Tyr Met Lys Lys Leu Gly Val Gly Ile Ser Leu Arg  
 20 25 30

Asn Met Gly Ala Met Ala Lys Pro Asp Cys Ile Ile Thr Cys Asp Gly  
 35 40 45

Lys Asn Leu Thr Ile Lys Thr Glu Ser Thr Leu Lys Thr Thr Gln Phe  
 50 55 60

Ser Cys Thr Leu Gly Glu Lys Phe Glu Gly Thr Thr Ala Val Gly Arg  
 65 70 75 80

Lys Thr Gln Thr Val Cys Ser Phe Thr Asp Gly Ala Leu Val Pro His  
 85 90 95

Gln Glu Trp Asp Gly Lys Glu Asn Thr Ile Thr Arg Lys Leu Lys Asp  
 100 105 110

Ala Ser Val Val Asp Cys Val Thr Asn Asn Val Thr Cys Thr Arg Ile  
 115 120 125

Tyr Glu Lys Val Glu  
 130

<210> 48  
 <211> 134  
 <212> PRT  
 <213> Homo sapiens

<400> 48  
 Ala Thr Val Gln Gln Leu Glu Gly Arg Trp Arg Leu Val Asp Ser Lys  
 1 5 10 15

Gly Phe Asp Glu Tyr Met Lys Glu Leu Gly Val Gly Ile Ala Leu Arg  
 20 25 30

Lys Met Gly Ala Met Ala Lys Pro Asp Cys Ile Ile Thr Cys Asp Gly  
 35 40 45

Lys Asn Leu Thr Ile Lys Thr Glu Ser Thr Leu Lys Thr Thr Gln Phe  
 50 55 60

Ser Cys Thr Leu Gly Glu Lys Phe Glu Glu Thr Thr Ala Asp Gly Arg  
 65 70 75 80

Lys Thr Gln Thr Val Cys Asn Phe Thr Asp Gly Ala Leu Val Gln His  
 85 90 95

Gln Glu Trp Asp Gly Lys Glu Ser Thr Ile Thr Arg Lys Leu Lys Asp  
 100 105 110

Gly Lys Leu Val Val Glu Cys Val Met Asn Asn Val Thr Cys Thr Arg  
 115 120 125

Ile Tyr Glu Lys Val Glu  
 130

<210> 49  
 <211> 135  
 <212> PRT  
 <213> Homo sapiens

<400> 49  
 Met Ala Thr Val Gln Gln Leu Glu Gly Arg Trp Arg Leu Val Asp Ser

1

5

10

15

Lys Gly Phe Asp Glu Tyr Met Lys Glu Leu Gly Val Gly Ile Ala Leu  
 20 25 30

Arg Lys Met Gly Ala Met Ala Lys Pro Asp Cys Ile Ile Thr Cys Asp  
 35 40 45

Gly Lys Asn Leu Thr Ile Lys Thr Glu Ser Thr Leu Lys Thr Thr Gln  
 50 55 60

Phe Ser Cys Thr Leu Gly Glu Lys Phe Glu Glu Thr Thr Ala Asp Gly  
 65 70 75 80

Arg Lys Thr Gln Thr Val Cys Asn Phe Thr Asp Gly Ala Leu Val Gln  
 85 90 95

His Gln Glu Trp Asp Gly Lys Glu Ser Thr Ile Thr Arg Lys Leu Lys  
 100 105 110

Asp Gly Lys Leu Val Val Glu Cys Val Met Asn Asn Val Thr Cys Thr  
 115 120 125

Arg Ile Tyr Glu Lys Val Glu  
 130 135

<210> 50  
 <211> 135  
 <212> PRT  
 <213> Homo sapiens

<400> 50  
 Met Ala Thr Val Gln Gln Leu Glu Gly Arg Trp Arg Leu Val Asp Ser  
 1 5 10 15

Lys Gly Phe Asp Glu Tyr Met Lys Glu Leu Gly Val Gly Ile Ala Leu  
 20 25 30

Arg Lys Met Gly Ala Met Ala Lys Pro Asp Cys Ile Ile Thr Cys Asp  
 35 40 45

Gly Lys Asn Leu Thr Ile Lys Thr Glu Ser Thr Leu Lys Thr Thr Gln  
 50 55 60

Phe Ser Cys Thr Leu Gly Glu Lys Phe Glu Glu Thr Thr Ala Asp Gly  
 65 70 75 80

Arg Lys Thr Gln Thr Val Cys Asn Phe Thr Asp Gly Ala Leu Val Gln  
 85 90 95

His Gln Glu Trp Asp Gly Lys Glu Ser Thr Ile Thr Arg Lys Leu Lys  
 100 105 110

Asp Gly Lys Leu Val Val Glu Cys Val Met Asn Asn Val Thr Cys Thr  
 115 120 125

Arg Ile Tyr Glu Lys Val Glu  
 130 135

<210> 51  
 <211> 135  
 <212> PRT  
 <213> Rattus norvegicus

<400> 51  
 Met Ala Ser Leu Lys Asp Leu Glu Gly Lys Trp Arg Leu Val Glu Ser  
 1 5 10 15

His Gly Phe Glu Asp Tyr Met Lys Glu Leu Gly Val Gly Leu Ala Leu  
 20 25 30

Arg Lys Met Gly Ala Met Ala Lys Pro Asp Cys Ile Ile Thr Leu Asp  
 35 40 45

Gly Asn Asn Leu Thr Val Lys Thr Glu Ser Thr Val Lys Thr Thr Val  
 50 55 60

Phe Ser Cys Thr Leu Gly Glu Lys Phe Asp Glu Thr Thr Ala Asp Gly  
 65 70 75 80

Arg Lys Thr Glu Thr Val Cys Thr Phe Thr Asp Gly Ala Leu Val Gln  
 85 90 95

His Gln Lys Trp Glu Gly Lys Glu Ser Thr Ile Thr Arg Lys Leu Lys  
 100 105 110

Asp Gly Lys Met Val Val Glu Cys Val Met Asn Asn Ala Ile Cys Thr  
 115 120 125

Arg Val Tyr Glu Lys Val Gln  
 130 135

<210> 52

<211> 135  
 <212> PRT  
 <213> Mus musculus

<400> 52

Met	Ala	Ser	Leu	Lys	Asp	Leu	Glu	Gly	Lys	Trp	Arg	Leu	Met	Glu	Ser			
1																		
														10				
															15			
His Gly Phe Glu Glu Tyr Met Lys Glu Leu Gly Val Gly Leu Ala Leu																		
															20	25	30	
Arg Lys Met Ala Ala Met Ala Lys Pro Asp Cys Ile Ile Thr Cys Asp																		
															35	40	45	
Gly Asn Asn Ile Thr Val Lys Thr Glu Ser Thr Val Lys Thr Thr Val																		
															50	55	60	
Phe Ser Cys Asn Leu Gly Glu Lys Phe Asp Glu Thr Thr Ala Asp Gly																		
															65	70	75	80
Arg Lys Thr Glu Thr Val Cys Thr Phe Gln Asp Gly Ala Leu Val Gln																		
															85	90	95	
His Gln Gln Trp Asp Gly Lys Glu Ser Thr Ile Thr Arg Lys Leu Lys																		
															100	105	110	
Asp Gly Lys Met Ile Val Glu Cys Val Met Asn Asn Ala Thr Cys Thr																		
															115	120	125	
Arg Val Tyr Glu Lys Val Gln																		
															130	135		

<210> 53  
 <211> 228  
 <212> DNA  
 <213> Homo sapiens

<400> 53

gctgtagaca	tggggatcg	atgctggaga	aacccctgc	tgctgctgat	tgcctggtc	60
ctgtcagcca	agctgggtca	cttccaaagg	tgggagggtct	tccagcagaa	gctcatgagc	120
aagaagaaca	tgaattcaac	actcaacttc	ttcattcaat	cctacaacaa	tgccagcaac	180
gacacctact	tatatcgagt	ccagaggcta	attcgaagtc	agatgcag		228

<210> 54  
 <211> 228  
 <212> DNA

<213> Homo sapiens

<400> 54

gctgtagaca tgggatcg atgctggaga aacccctgc tgctgctgat tgccctggtc 60  
 ctgtcagcca agctgggtca cttccaaagg tgggagggtc tccagcagaa gctcatgagc 120  
 aagaagaaca tgaattcaac actcaacttc ttcatcaat cctacaacaa tgccagcaac 180  
 gacacctact tatatcgagt ccagaggcta attcgaagtc agatgcag 228

<210> 55

<211> 98

<212> PRT

<213> Homo sapiens

<400> 55

Ser Lys Lys Asn Met Asn Ser Thr Leu Asn Phe Phe Ile Gln Ser Tyr  
 1 5 10 15

Asn Asn Ala Ser Asn Asp Thr Tyr Leu Tyr Arg Val Gln Arg Leu Ile  
 20 25 30

Arg Ser Gln Met Gln Leu Thr Thr Gly Val Glu Tyr Ile Val Thr Val  
 35 40 45

Lys Ile Gly Trp Thr Lys Cys Lys Arg Asn Asp Thr Ser Asn Ser Ser  
 50 55 60

Cys Pro Leu Gln Thr Lys Lys Leu Arg Lys Ser Leu Ile Cys Glu Ser  
 65 70 75 80

Leu Ile Tyr Thr Met Pro Trp Leu Asn Tyr Phe Gln Leu Trp Asn Asn  
 85 90 95

Ser Cys

<210> 56

<211> 99

<212> PRT

<213> Rattus norvegicus

<400> 56

Ser Glu Glu Gly Val Gln Arg Ala Leu Asp Phe Ala Val Ser Glu Tyr  
 1 5 10 15

Asn Lys Gly Ser Asn Asp Ala Tyr His Ser Arg Ala Ile Gln Val Val  
 20 25 30

Arg Ala Arg Lys Gln Leu Val Ala Gly Ile Asn Tyr Tyr Leu Asp Val  
 35 40 45

Glu Met Gly Arg Thr Thr Cys Thr Lys Ser Gln Thr Asn Leu Thr Asn  
 50 55 60

Cys Pro Phe His Asp Gln Pro His Leu Met Arg Lys Ala Leu Cys Ser  
 65 70 75 80

Phe Gln Ile Tyr Ser Val Pro Trp Lys Gly Thr His Thr Leu Thr Lys  
 85 90 95

Ser Ser Cys

<210> 57

<211> 99

<212> PRT

<213> Homo sapiens

<400> 57

Met Ser Lys Lys Asn Met Asn Ser Thr Leu Asn Phe Phe Ile Gln Ser  
 1 5 10 15

Tyr Asn Asn Ala Ser Asn Asp Thr Tyr Leu Tyr Arg Val Gln Arg Leu  
 20 25 30

Ile Arg Ser Gln Met Gln Leu Thr Thr Gly Val Glu Tyr Ile Val Thr  
 35 40 45

Val Lys Ile Gly Trp Thr Lys Cys Lys Arg Asn Asp Thr Ser Asn Ser  
 50 55 60

Ser Cys Pro Leu Gln Thr Lys Lys Leu Arg Lys Ser Leu Ile Cys Glu  
 65 70 75 80

Ser Leu Ile Tyr Thr Met Pro Trp Leu Asn Tyr Phe Gln Leu Trp Asn  
 85 90 95

Asn Ser Cys

<210> 58

<211> 101

<212> PRT

<213> Homo sapiens

<400> 58

Leu Asn Asp Lys Ser Val Gln Cys Ala Leu Asp Phe Ala Ile Ser Glu  
 1 5 10 15

Tyr Asn Lys Val Ile Asn Lys Asp Glu Tyr Tyr Ser Arg Pro Leu Gln  
 20 25 30

Val Met Ala Ala Tyr Gln Gln Ile Val Gly Gly Val Asn Tyr Tyr Phe  
 35 40 45

Asn Val Lys Phe Gly Arg Thr Thr Cys Thr Lys Ser Gln Pro Asn Leu  
 50 55 60

Asp Asn Cys Pro Phe Asn Asp Gln Pro Lys Leu Lys Glu Glu Phe  
 65 70 75 80

Cys Ser Phe Gln Ile Asn Glu Val Pro Trp Glu Asp Lys Ile Ser Ile  
 85 90 95

Leu Asn Tyr Lys Cys  
 100

<210> 59

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:  
 Oligonucleotide primer

<400> 59

tctcccacag gccaggac 18

<210> 60

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:  
 Oligonucleotide primer

<400> 60

cgcatggttt tgggattg

18

<210> 61  
<211> 33  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:  
Oligonucleotide primer

<400> 61  
ggatccgcca agctgggtca cttccaaagg tgg 33

<210> 62  
<211> 32  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:  
Oligonucleotide primer

<400> 62  
ctcgagtcg aggttctgc ccacatgctc gg 32

<210> 63  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:  
Oligonucleotide primer

<400> 63  
gtggagtata tagtcactgt g 21

<210> 64  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:  
Oligonucleotide primer

<400> 64  
cacagtgact atatactcga g

21

<210> 65  
<211> 378  
<212> DNA  
<213> Homo sapiens

<400> 65  
gccaagctgg gtcacttcca aaggtggag ggcttccagc agaagctcat gagcaagaag 60  
aacatgaatt caacactcaa cttcttcatt caatcctaca acaatgccag caacgacacc 120  
tacttataatc gagtccagag gctaattcga agtcagatgc agctgacgac gggagtggag 180  
tatatagtca ctgtgaagat tggccggacc aaatgcaaga ggaatgacac gagcaattct 240  
tcctgccccc tgcaaagcaa gaagctgaga aagagttaa tttgcgagtc tttgatatac 300  
accatgccct ggataaacta ttccagctc tggaacaatt cctgtctgga ggccgagcat 360  
gtgggcagaa acctcaga 378

<210> 66  
<211> 126  
<212> PRT  
<213> Homo sapiens

<400> 66  
Ala Lys Leu Gly His Phe Gln Arg Trp Glu Gly Phe Gln Gln Lys Leu  
1 5 10 15

Met Ser Lys Lys Asn Met Asn Ser Thr Leu Asn Phe Phe Ile Gln Ser  
20 25 30

Tyr Asn Asn Ala Ser Asn Asp Thr Tyr Leu Tyr Arg Val Gln Arg Leu  
35 40 45

Ile Arg Ser Gln Met Gln Leu Thr Thr Gly Val Glu Tyr Ile Val Thr  
50 55 60

Val Lys Ile Gly Arg Thr Lys Cys Lys Arg Asn Asp Thr Ser Asn Ser  
65 70 75 80

Ser Cys Pro Leu Gln Ser Lys Lys Leu Arg Lys Ser Leu Ile Cys Glu  
85 90 95

Ser Leu Ile Tyr Thr Met Pro Trp Ile Asn Tyr Phe Gln Leu Trp Asn  
100 105 110

Asn Ser Cys Leu Glu Ala Glu His Val Gly Arg Asn Leu Arg  
 115 120 125

<210> 67  
 <211> 378  
 <212> DNA  
 <213> Homo sapiens

<400> 67  
 gccaagctgg gtcacttcca aagggtggag ggcttccagc agaagctcat gagcaagaag 60  
 aacatgaatt caacactcaa cttcttcatt caatcctaca acaatgccag caacgacacc 120  
 tacttatatc gagtccagag gctaattcga agtcagatgc agctgacgac gggagtggag 180  
 tatatagtca ctgtgaagat tggctggacc aaatgcaaga ggaatgacac gagcaattct 240  
 tcctgcccc tgcaaaccaa gaagctgaga aagagttaa tttgcagtc tttaatatac 300  
 accatgcctt ggttaaacta tttccagctc tggacaatt cctgtctgga gcccagcat 360  
 gtgggcagaa acctcaga 378

<210> 68  
 <211> 126  
 <212> PRT  
 <213> Homo sapiens

<400> 68  
 Ala Lys Leu Gly His Phe Gln Arg Trp Glu Gly Phe Gln Gln Lys Leu  
 1 5 10 15

Met Ser Lys Lys Asn Met Asn Ser Thr Leu Asn Phe Phe Ile Gln Ser  
 20 25 30

Tyr Asn Asn Ala Ser Asn Asp Thr Tyr Leu Tyr Arg Val Gln Arg Leu  
 35 40 45

Ile Arg Ser Gln Met Gln Leu Thr Thr Gly Val Glu Tyr Ile Val Thr  
 50 55 60

Val Lys Ile Gly Trp Thr Lys Cys Lys Arg Asn Asp Thr Ser Asn Ser  
 65 70 75 80

Ser Cys Pro Leu Gln Thr Lys Lys Leu Arg Lys Ser Leu Ile Cys Glu  
 85 90 95

Ser Leu Ile Tyr Thr Met Pro Trp Leu Asn Tyr Phe Gln Leu Trp Asn  
 100 105 110

Asn Ser Cys Leu Glu Pro Glu His Val Gly Arg Asn Leu Arg

115

120

125

<210> 69  
<211> 1482  
<212> DNA  
<213> *Homo sapiens*

<400> 69

<210> 70  
<211> 424  
<212> PRT  
<213> *Homo sapiens*

<400> 70

Gly Gly Gly Gly Cys Asp Arg Tyr Glu Pro Leu Pro Pro Ser Leu Pro  
1 5 10 15

Ala Ala Gly Glu Gln Asp Cys Cys Gly Glu Arg Val Val Ile Asn Ile  
20 25 30

Ser Gly Leu Arg Phe Glu Thr Gln Leu Lys Thr Leu Cys Gln Phe Pro  
 35 40 45

Glu Thr Leu Leu Gly Asp Pro Lys Arg Arg Met Arg Tyr Phe Asp Pro  
 50 55 60

Leu Arg Asn Glu Tyr Phe Phe Asp Arg Asn Arg Pro Ser Phe Asp Ala  
 65 70 75 80

Ile Leu Tyr Tyr Tyr Gln Ser Gly Gly Arg Ile Arg Arg Pro Val Asn  
 85 90 95

Val Pro Ile Asp Ile Phe Ser Glu Glu Ile Arg Phe Tyr Gln Leu Gly  
 100 105 110

Glu Glu Ala Met Glu Lys Phe Arg Glu Asp Glu Gly Phe Leu Arg Glu  
 115 120 125

Glu Glu Arg Pro Leu Pro Arg Arg Asp Phe Gln Arg Gln Val Trp Leu  
 130 135 140

Leu Phe Glu Tyr Pro Glu Ser Ser Gly Pro Ala Arg Gly Ile Ala Ile  
 145 150 155 160

Val Ser Val Leu Val Ile Leu Ile Ser Ile Val Ile Phe Cys Leu Glu  
 165 170 175

Thr Leu Pro Glu Phe Arg Asp Glu Lys Asp Tyr Pro Ala Ser Thr Ser  
 180 185 190

Gln Asp Ser Phe Glu Ala Ala Gly Asn Ser Thr Ser Gly Ser Arg Ala  
 195 200 205

Gly Ala Ser Ser Phe Ser Asp Pro Phe Phe Val Val Glu Thr Leu Cys  
 210 215 220

Ile Ile Trp Phe Ser Phe Glu Leu Leu Val Arg Phe Phe Ala Cys Pro  
 225 230 235 240

Ser Lys Ala Thr Phe Ser Arg Asn Ile Met Asn Leu Ile Asp Ile Val  
 245 250 255

Ala Ile Ile Pro Tyr Phe Ile Thr Leu Gly Thr Glu Leu Ala Glu Arg  
 260 265 270

Gln Gly Asn Gly Gln Gln Ala Met Ser Leu Ala Ile Leu Arg Val Ile  
 275 280 285

Arg Leu Val Arg Val Phe Arg Ile Phe Lys Leu Ser Arg His Ser Lys  
 290 295 300  
  
 Gly Leu Gln Ile Leu Gly Gln Thr Leu Lys Ala Ser Met Arg Glu Leu  
 305 310 315 320  
  
 Gly Leu Leu Ile Phe Phe Leu Phe Ile Gly Val Ile Leu Phe Ser Ser  
 325 330 335  
  
 Ala Val Tyr Phe Ala Glu Ala Asp Asp Pro Thr Ser Gly Phe Ser Ser  
 340 345 350  
  
 Ile Pro Asp Ala Phe Trp Trp Ala Val Val Thr Met Thr Thr Val Gly  
 355 360 365  
  
 Tyr Gly Asp Met His Pro Val Thr Ile Gly Gly Lys Ile Val Gly Ser  
 370 375 380  
  
 Leu Cys Ala Ile Ala Gly Val Leu Thr Ile Ala Leu Pro Val Pro Val  
 385 390 395 400  
  
 Ile Val Ser Asn Phe Asn Tyr Phe Tyr His Arg Glu Thr Glu Gly Glu  
 405 410 415  
  
 Glu Gln Ser Gln Tyr Met His Val  
 420

<210> 71  
 <211> 132  
 <212> PRT  
 <213> Homo sapiens

<400> 71  
 Met Glu Pro Val Pro Gly Ser Arg Arg Gln Thr Asp Lys Gly Cys Ser  
 1 5 10 15  
  
 Gly Asp Thr Ala His Leu Pro Leu Ser Cys Leu Gly Ala Gln Glu Ser  
 20 25 30  
  
 Arg Arg Pro Pro Pro Arg Ala Ser Thr Lys Thr Gly Ser Gln Pro Ala  
 35 40 45  
  
 Met Pro Ser Pro Leu Arg Pro Gln Gly Ser Ala Gly Val Leu Pro Glu  
 50 55 60  
  
 Pro Arg Val Pro Val Gln Lys Pro Gly Ile Asn Ala Ala Ser Pro Ile  
 65 70 75 80

Gly Thr Val Arg Val Glu Arg Gly Arg Pro Thr Val Ser Pro Ala Gly  
 85 90 95

Arg Gly Ser Pro Arg Gly Gly His Val Gly Gly Leu Thr Ala Pro Ser  
 100 105 110

Thr Pro Gly His Ser Asp His Gly Leu His Thr Gln Lys Gln Ser Gly  
 115 120 125

Ser His Ala Trp  
 130

<210> 72

<211> 132

<212> PRT

<213> Strongylocentrotus purpuratus

<400> 72

Met Glu Pro Val Pro Gly Ser Arg Arg Gln Thr Asp Lys Gly Cys Ser  
 1 5 10 15

Gly Asp Thr Ala His Leu Pro Leu Ser Cys Leu Gly Ala Gln Glu Ser  
 20 25 30

Arg Arg Pro Pro Pro Arg Ala Ser Thr Lys Thr Gly Ser Gln Pro Ala  
 35 40 45

Met Pro Ser Pro Leu Arg Pro Gln Gly Ser Ala Gly Val Leu Pro Glu  
 50 55 60

Pro Arg Val Pro Val Gln Lys Pro Gly Ile Asn Ala Ala Ser Pro Ile  
 65 70 75 80

Gly Thr Val Arg Val Glu Arg Gly Arg Pro Thr Val Ser Pro Ala Gly  
 85 90 95

Arg Gly Ser Pro Arg Gly Gly His Val Gly Gly Leu Thr Ala Pro Ser  
 100 105 110

Thr Pro Gly His Ser Asp His Gly Leu His Thr Gln Lys Gln Ser Gly  
 115 120 125

Ser His Ala Trp  
 130

<210> 73  
 <211> 312  
 <212> PRT  
 <213> Homo sapiens

<400> 73

Met Thr Leu Arg Leu Leu Glu Asp Trp Cys Arg Gly Met Asp Met Asn  
 1 5 10 15

Pro Arg Lys Ala Leu Leu Ile Ala Gly Ile Ser Gln Ser Cys Ser Val  
 20 25 30

Ala Glu Ile Glu Glu Ala Leu Gln Ala Gly Leu Ala Pro Leu Gly Glu  
 35 40 45

Tyr Arg Leu Leu Gly Arg Met Phe Arg Arg Asp Glu Asn Arg Lys Val  
 50 55 60

Ala Leu Val Gly Leu Thr Ala Glu Thr Ser His Ala Leu Val Pro Lys  
 65 70 75 80

Glu Ile Pro Gly Lys Gly Gly Ile Trp Arg Val Ile Phe Lys Pro Pro  
 85 90 95

Asp Pro Asp Asn Thr Phe Leu Ser Arg Leu Asn Glu Phe Leu Ala Gly  
 100 105 110

Glu Gly Met Thr Val Gly Glu Leu Ser Arg Ala Leu Gly His Glu Asn  
 115 120 125

Gly Ser Leu Asp Pro Glu Gln Gly Met Ile Pro Glu Met Trp Ala Pro  
 130 135 140

Met Leu Ala Gln Ala Leu Glu Ala Leu Gln Pro Ala Leu Gln Cys Leu  
 145 150 155 160

Lys Tyr Lys Lys Leu Arg Val Phe Ser Gly Arg Glu Ser Pro Glu Pro  
 165 170 175

Gly Glu Glu Glu Phe Gly Arg Trp Met Phe His Thr Thr Gln Met Ile  
 180 185 190

Lys Ala Trp Gln Val Pro Asp Val Glu Lys Arg Arg Arg Leu Leu Glu  
 195 200 205

Ser Leu Arg Gly Pro Ala Leu Asp Val Ile Arg Val Leu Lys Ile Asn  
 210 215 220

Asn Pro Leu Ile Thr Val Asp Glu Cys Leu Gln Ala Leu Glu Glu Val  
 225 230 235 240

Phe Gly Val Thr Asp Asn Pro Arg Glu Leu Gln Val Lys Tyr Leu Thr  
 245 250 255

Thr Tyr Gln Lys Asp Glu Glu Lys Leu Ser Ala Tyr Val Leu Arg Leu  
 260 265 270

Glu Pro Leu Leu Gln Lys Leu Val Gln Arg Gly Ala Ile Glu Arg Asp  
 275 280 285

Ala Val Asn Gln Ala Arg Leu Asp Gln Val Ile Ala Gly Ala Val His  
 290 295 300

Lys Thr Ile Arg Arg Glu Leu Asn  
 305 310

<210> 74

<211> 312

<212> PRT

<213> Homo sapiens

<400> 74

Met Thr Leu Arg Leu Leu Glu Asp Trp Cys Arg Gly Met Asp Met Asn  
 1 5 10 15

Pro Arg Lys Ala Leu Leu Ile Ala Gly Ile Ser Gln Ser Cys Ser Val  
 20 25 30

Ala Glu Ile Glu Glu Ala Leu Gln Ala Gly Leu Ala Pro Leu Gly Glu  
 35 40 45

Tyr Arg Leu Leu Gly Arg Met Phe Arg Arg Asp Glu Asn Arg Lys Val  
 50 55 60

Ala Leu Val Gly Leu Thr Ala Glu Thr Ser His Ala Leu Val Pro Lys  
 65 70 75 80

Glu Ile Pro Gly Lys Gly Ile Trp Arg Val Ile Phe Lys Pro Pro  
 85 90 95

Asp Pro Asp Asn Thr Phe Leu Ser Arg Leu Asn Glu Phe Leu Ala Gly  
 100 105 110

Glu Gly Met Thr Val Gly Glu Leu Ser Arg Ala Leu Gly His Glu Asn  
 115 120 125

Gly Ser Leu Asp Pro Glu Gln Gly Met Ile Pro Glu Met Trp Ala Pro  
 130 135 140

Met Leu Ala Gln Ala Leu Glu Ala Leu Gln Pro Ala Leu Gln Cys Leu  
 145 150 155 160

Lys Tyr Lys Lys Leu Arg Val Phe Ser Gly Arg Glu Ser Pro Glu Pro  
 165 170 175

Gly Glu Glu Glu Phe Gly Arg Trp Met Phe His Thr Thr Gln Met Ile  
 180 185 190

Lys Ala Trp Gln Val Pro Asp Val Glu Lys Arg Arg Arg Leu Leu Glu  
 195 200 205

Ser Leu Arg Gly Pro Ala Leu Asp Val Ile Arg Val Leu Lys Ile Asn  
 210 215 220

Asn Pro Leu Ile Thr Val Asp Glu Cys Leu Gln Ala Leu Glu Glu Val  
 225 230 235 240

Phe Gly Val Thr Asp Asn Pro Arg Glu Leu Gln Val Lys Tyr Leu Thr  
 245 250 255

Thr Tyr Gln Lys Asp Glu Glu Lys Leu Ser Ala Tyr Val Leu Arg Leu  
 260 265 270

Glu Pro Leu Leu Gln Lys Leu Val Gln Arg Gly Ala Ile Glu Arg Asp  
 275 280 285

Ala Val Asn Gln Ala Arg Leu Asp Gln Val Ile Ala Gly Ala Val His  
 290 295 300

Lys Thr Ile Arg Arg Glu Leu Asn  
 305 310

<210> 75  
 <211> 425  
 <212> PRT  
 <213> Homo sapiens

<400> 75  
 Gly Arg Arg Gly Cys Ala Arg His Gly Ala Ala Val Pro Ala Ala Pro  
 1 5 10 15

Cys Gly Cys Cys Glu Arg Leu Val Leu Asn Val Ala Gly Leu Arg Phe

20	25	30
Glu Thr Arg Ala Arg Thr Leu Gly Arg Phe Pro Asp Thr Leu Leu Gly		
35	40	45
Asp Pro Ala Arg Arg Gly Arg Phe Tyr Asp Asp Ala Arg Arg Glu Tyr		
50	55	60
Phe Phe Asp Arg His Arg Pro Ser Phe Asp Ala Val Leu Tyr Tyr Tyr		
65	70	75
Gln Ser Gly Gly Arg Leu Arg Arg Pro Ala His Val Pro Leu Asp Val		
85	90	95
Phe Leu Glu Glu Val Ala Phe Tyr Gly Leu Gly Ala Ala Ala Leu Ala		
100	105	110
Arg Leu Arg Glu Asp Glu Gly Cys Pro Val Pro Pro Glu Arg Pro Leu		
115	120	125
Pro Arg Arg Ala Phe Ala Arg Gln Leu Trp Leu Leu Phe Glu Phe Pro		
130	135	140
Glu Ser Ser Gln Ala Ala Arg Val Leu Ala Val Val Ser Val Leu Val		
145	150	155
Ile Leu Val Ser Ile Val Val Phe Cys Leu Glu Thr Leu Pro Asp Phe		
165	170	175
Arg Asp Asp Arg Asp Gly Thr Gly Leu Ala Ala Ala Ala Ala Gly		
180	185	190
Pro Val Phe Pro Ala Pro Leu Asn Gly Ser Ser Gln Met Pro Gly Asn		
195	200	205
Pro Pro Arg Leu Pro Phe Asn Asp Pro Phe Phe Val Val Glu Thr Leu		
210	215	220
Cys Ile Cys Trp Phe Ser Phe Glu Leu Leu Val Arg Leu Leu Val Cys		
225	230	235
Pro Ser Lys Ala Ile Phe Phe Lys Asn Val Met Asn Leu Ile Asp Phe		
245	250	255
Val Ala Ile Leu Pro Tyr Phe Val Ala Leu Gly Thr Glu Leu Ala Arg		
260	265	270
Gln Arg Gly Val Gly Gln Gln Ala Met Ser Leu Ala Ile Leu Arg Val		

275

280

285

Ile Arg Leu Val Arg Val Phe Arg Ile Phe Lys Leu Ser Arg His Ser  
290 295 300

Lys Gly Leu Gln Ile Leu Gly Gln Thr Leu Arg Ala Ser Met Arg Glu  
305 310 315 320

Leu Gly Leu Leu Ile Phe Phe Leu Phe Ile Gly Val Val Leu Phe Ser  
325 330 335

Ser Ala Val Tyr Phe Ala Glu Val Asp Arg Val Asp Ser His Phe Thr  
340 345 350

Ser Ile Pro Glu Ser Phe Trp Trp Ala Val Val Thr Met Thr Thr Val  
355 360 365

Gly Tyr Gly Asp Met Ala Pro Val Thr Val Gly Gly Lys Ile Val Gly  
370 375 380

Ser Leu Cys Ala Ile Ala Gly Val Leu Thr Ile Ser Leu Pro Val Pro  
385 390 395 400

Val Ile Val Ser Asn Phe Ser Tyr Phe Tyr His Arg Glu Thr Glu Gly  
405 410 415

Glu Glu Ala Gly Met Phe Ser His Val  
420 425